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ABSTRACT

The history of multimedia and descriptions of various multimedia events from 1900 to 1972 are presented. The development of multimedia events is described for four eras and four main classifications of events: multiscreen presentations, electronic media and performers, environmental theater, and environments. Five appendixes include a discussion of terms used in the report, a chart of multimedia events, a chronological list of important technical advances in multimedia equipment, letters, and an informal index. A 20 page bibliography concludes the document. (CH)

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A HISTORY OF MULTIMEDIA

by

Larry Kenneth Burke, B.F.A.

THESIS

Presented to the Faculty of the Graduate School of
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for the Degree of

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ERRATA

p.23 line 9, delete "head-on" and line 11 should read "leaped from the orchestra pit onto the stage"

p.30 line 9 should read "fired toward the screen and "killed" the robber."

p.126 amend lines 5 and 6 to read simply "before 1961"

p.137 the 1937 entry for Vitarama should be deleted, and the information should be added to the 1938 Vitarama entry (p.138)

p.150 Tales of Hoffman information (1966) should be deleted and then be added as an entry for the FALL of 1964

Preface

This study was written in the belief that it is the first attempt to write a comprehensive history of the phenomenon known as multimedia. Other writings have served as invaluable aids in this task; the most helpful were Gene Youngblood's Expanded Cinema, Jeffery Embler's dissertation of the uses of film in dramatic theatre, and Donald Perrin's dissertation on multiscreen history and multiscreen in education (all cited in the bibliography). As exhaustive as these works are, they cover only specific topics in the total field of electronic mixed media and, as such, fail to be comprehensive general histories. No one consulted in the course of compiling this survey felt the need for the arbitrary definitions imposed by the author; however, he chose to use them in an attempt to clarify some of the confusion encountered when gathering the diverse research material.

Sincere thanks are due to the author's wife and to his supervisory committee, all of whom offered much in the way of sources and editing. Equal thanks is extended to Gerd Stern — of USCO and Intermedia Systems Corporation — for his unrestrained aid in supplying a wealth of data on his organizations. Thanks also go to all others who were so considerate in replying to letters of inquiry.

This thesis was submitted to the author's supervisory committee for approval on April 20, 1972.

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Introduction

I. Definitions

> mixed media n 1: a work of art executed in more than one medium; also: a commercial production (as a motion picture) containing disparate techniques or art forms, 2: a presentation (as in a theatre) in which several media are employed simultaneously[1]

For purposes of clarity, the term electronic mixed media will be used in this paper to describe any presentation that blends any electronic medium with any other medium. Thus, a lecture that combines a speaker and one screen of slides is mixed media, just as a painting that combines chalk and paint is mixed media. Certain types of electronic mixed media will be defined as multimedia for the purposes of this study. Specifically, multimedia refers to the juxtaposition of two or more communications media -- at least two of which must be electronically powered — to produce a total work which is different from the sum of its parts. The individual elements may or may not be complete statements in themselves, but taken together they form an entity. Hereafter in the text, the non-quoted word multimedia always indicates the term just defined. The quoted term "multimedia" will be used only when referring to works which have been called "multimedia" in print, but do not fit this author's definition of the term. Further discussion of these terms is contained in Appendix I.

Examples of multimedia are: (1) many works of the New Theatre,[2] (2) productions of "legitimate" theatre, ballet and opera which use electronic media as unique, integral elements, (3) media Environments, most of which employ no performers, and (4) multiscreen presentations that use separate (not redundant) forms of communication. Exclusions include such things as contained media (television, sound films), multiple screen works that equate to single-screen films, illustrated lectures and demonstrations, computer films, holographs, and multi-monitor television sculptures.

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[1] Webster's Seventh New Collegiate Dictionary, (1969), p. 543.

[2] New Theatre is used in this paper as the term is described in Michael Kirby, The Art of Time (New York: E. P. Dutton and Co., Inc., 1969), pp. 75-98 and pp. 117-130.

Other words that need clarification are Environmental Theatre and Environment. Environmental Theatre is used as the term was defined by Michael Kirby:

> Environmental theatre, on the other hand, can be viewed as a way in which the spatial characteristics of the stage itself as it is related to the spectator may become a specific aesthetic element of a particular presentation. Environmental Theatre, in this sense, makes use of an expressive dimension that is not exploited by traditional performance arrangements.[3]

The category of Environments is defined by Allan Kaprow's use of the word: "An environment is literally a surrounding to be entered into."[4] Viewers in an Environment may be requested to perform some action, but no actors or performers as such are used.

II. General History

Multimedia is a phenomenon of the 1960's, although its original events date back to 1952 and its precursors began in 1900. The term multimedia came into use in 1961, but the first multimedia event recognized by most authors is the untitled presentation given by John Cage at Black

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[3] *Ibid.*, p. 134.

[4] *Allan Kaprow* (Pasadena: Pasadena Art Museum, 1967), p. 11.

Mountain College, North Carolina, in the summer of 1952.[5] Trying to clarify whether some events of the 1950's can be called multimedia since they occurred before the word originated is as confusing as trying to determine if Hieronymous Bosch can be called a Surrealist. The option taken here is to disregard the nine-year time lag between Cage's work and the present generic name for his contribution. Allan Kaprow's term Happening first appeared in its present usage in 1959,[6] and Cage's 1952 event was then claimed by many writers as the first example of Happenings or Theatre Pieces or whatever term they cared to use. Similarly, it seems certain that the field of multimedia also began with Cage, so his 1952 work is used as the first example of what will include some Happenings, Theatre Pieces, etc. In addition, this study will encompass many multiscreen and environmental presentations that have nothing to do with the performances of the New Theatre.

Ranking in importance with the 1952 Cage piece is the "sample lesson" of Charles Eames, George Nelson and Alexander Girard in early 1953 at The University of Georgia. This one-hour lecture (the same format as Cage's presentation) included films, multiple screens of slides, audio tapes and controlled incense odors.[7] Cage's event was the germinal one using performers with electronic multimedia; Eames' and Nelson's lecture was a presentation in which the media performed all the roles. Still, the 1953 lecture will be elaborated on more for its influence than for its distinction as multimedia. It was mainly a string of separate films and slide shows which added up to one central message. Even so, all present multiscreen and multimedia presentations in education owe a significant debt of origination to Eames and Nelson.

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[5] Richard Kostelantz, The Theatre of Mixed Means (New York: The Dial Press, Inc., 1968), pp. 30-31.

[6] Allan Kaprow, p. 21. The word was used in Kaprow's article "The Demiurge" for the Vol. 30 (No. 4, 1959) issue of the Rutgers Anthologist, in which Kaprow gave the script for what would be his first public Happening, "18 Happenings in Six Parts." Kaprow had previously used the term "happenings" in a different context in his article "The Legacy of Jackson Pollock" written in late 1956 and published in the October 1958 issue of Art News.

Since the body of this report is devoted to describing events from 1900 through early 1972, it is necessary at this point to give only the briefest outline of major multimedia developments. The Brussels World's Fair of 1958 gave the world its first major exposure to the talents of Josef Svoboda. This Czechoslovakian sceneographer used the Fair to introduce two of his most fertile ideas: (1) Polyekran -- the multi-screen slide and film show which served as a further development of the Eames-Nelson breakthrough — and (2) Laterna Magika — the wedding of performers to multiple screens of slides and film. Also introduced to the world audience of the Brussles Fair was the multiscreen, multisound total environment of the Vortex concert, begun in 1957 by Henry Jacobs and Jordan Belson in a San Francisco planetarium.

The next major development was the opening in January 1961 of the Multimedia Instructional Laboratory at The University of Wisconsin. This facility served to reintroduce multimedia into the educational realm -- this time on a permanent basis -- and paved the way for rapid expansion of multimedia usage in the education field. "Multimedia" as a word appears to have originated at this Wisconsin laboratory.

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[7] George Nelson, "Art X: The Georgia Experiment," Industrial Design, October 1954, p. 45.

On the West Coast in the early 1960's there was a different type of development occuring; Vortex-like light shows (with projections of moving liquids, lights and slides) were being united with electronically amplified rock music. These early psychedelic environments seem to have originated in the California communities of North Beach and West Venice,[8] but they did not expand in scope and impact until about 1965. By this time such groups as the Beatles, the Beach Boys and the Rolling Stones had firmly established the primacy of large-audience interaction with the loud rock music of drums and electric guitars. Though none of the above groups were associated with light shows, they did clear the way for psychedelic groups such as Jefferson Airplane and the Grateful Dead. The rock music-light shows that developed on both coasts introduced American youth to tribal, ritualistic environmental experiences that came to a full flowering in 1967. One group who carried the light show to the level of a true, total electronic media environment was USCO (the "US Company"). Beginning in 1963 this team of artists and technicians produced a magnificent series of shows and displays utilizing many channels of sound, lights, strobes and projections. Several of their presentations were shown across the country between 1963 and 1966.

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[8] Sheldon Renan, An Introduction to the American Underground Film (New York: E. P. Dutton and Co., Inc., 1967), p. 251.

Multimedia grew rapidly in the mid-1960's. The biggest blast of this new concept to hit the New York area came in November 1965 with the New Cinema Festival I held at the Film Makers Cinematheque. This series of performances contained many works of lasting impression, particularly the use of multiple projections by USCO and Stan VanDerBeek and the combination of film with performers in Ed Emschwiller's Body Works and Roberts Blossom's Filmstage. In December 1966, New York City was also the site for the "Nine Evenings of Theatre and Engineering" by the newly-formed organization, Experiments in Art and Technology (E. A. T.). Critical reaction was mixed concerning the "Nine Evenings," while more enthusiasm had greeted the New Cinema showings. Nevertheless, by the end of 1966, electronic mixed media in its many forms had established a beachhead for permanent inclusion in contemporary American consciousness. The apogee of multiscreen usage (which was generally mistaken for multimedia) came in the magnificent spectacles of Expo 67.

Curiously enough, since 1967 the general idea of multimedia has permeated American culture but with few significant innovations in the field. Enormous scale seems to have been the only area for new accomplishments in the last four years, with John Cage's mammoth HPSCHD (1969) at The University of Illinois and the 1970 Venezuelan extravaganza "Imagen de Caracas" being the winners in this category. It would appear that misuse of the idea of "multimedia" and a general creative slump are responsible for the present state of the art.

Massive proliferation based on the attitude that any combination of slides and sound is "multimedia" has brought this new form of communication to the same level as most commercial television. To an audience uneducated in true multimedia, almost any display of visuals and sounds is considered "worthwhile" and "impressive." Continued acceptance of mediocrity (especially continued financial acceptance) is hardly incentive for further aesthetic development. Where the more accomplished practioners of multimedia are concerned, the novelty of the new form and their discoveries seems to have faded when faced with further evolution. Even as early as 1964, Charles Eames' contribution to the New York World's Fair (a 16-screen presentation for IBM) was blasted by Jonas Mekas, the underground film critic, as being "unfunctional" and "silly."[9] Ray Eames, wife and working colleague of Charles, retorted by calling the Expo 67 exhibits "rather frivolous."[10]

This section closes with multimedia in a state of doldrums, not decline. If anything, the recent years appear to be a time of evaluation of what has passed so recently and rapidly. Multimedia is now in abundance, but few of the current commercial products show progress from older discoveries. Numerous students of electronic media have suggested more substantial uses of multimedia. Gerd Stern (of USCO) has long been aware of the religious nature of electronic media as mind extenders and replacements for drugs in our society.[11] Charles Steinberg, in his study of mass communications, urged the use of electronic media by theologians and scientists to "find a basis on which to reconcile man's conquest of the finite with his aspirations toward the infinite."[12] Stan VanDerBeek has been proposing "Movie Dromes" since at least early 1966 as world-wide centers for multi-image information exchange.[13] As yet the only one in operation is at VanDerBeek's home in Stony Point, New York. This theatre would seem to answer the call of Robert E. L. Masters and Jean Houston for "intense sensory experiences (that) open the gates to the repressed and the forgotten, evoke a symbolic and mythic consciousness, and finally achieve levels that in psychedelic experience are ones of profound spiritual awareness."[14]

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[9] Jonas Mekas, reprint of Village Voice reviews, Film Culture, Winter 1966, p. 11.

[10] Paul Schrader, "The Films of Charles Eames," Film Quarterly, Spring 1970, p. 7.

[11] Jonas Mekas, "USCO," Film Culture, Winter 1966, p. 3.

III. Other Forms of Electronic Mixed Media

The previous section noted that, despite few significant advances in the field since 1967, "multimedia" has become a widespread, enthusiastically accepted part of American culture. Disregarding obvious misuses of the term, what actually constitutes the bulk of "multimedia" in present culture? For the most part, "multimedia" consists of a presentation mixing one to three screens of slides (occasionally Super 8 or 16mm film is used also) with audio tape of music or a narrative about some agency, program or idea.

The slide and music shows are most frequently found in private homes as amateur ventures, in churches as ministers strive for modernization, and in college classroom projects -- particularly in communication and education courses. Usually these shows attempt to illustrate the lyrics of the music or achieve a pictorial mood similar to the musical mood. This form of communication has the normal potential for a range in quality; however, it seems obvious to this author that most of these slide-tape presentations should be called slide-shows rather than multimedia. Slide-show is a purely neutral term used to describe, not to degrade. These mixed media shows are most likely derived from the Eames-Nelson "sample lesson" of 1953 and from the military and college multiscreen presentation halls of the early 1960's.

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[12] Charles S. Steinberg, Mass-Media and Communicaton (New York: Hastings House, 1966), p. xi.

[13] Stan VanDerBeek, "'Culture Intercom' and Expanded Cinema," Film Culture, Spring 1966, pp. 41-47.

[14] Robert E. L. Masters and Jean Houston, Psychedelic Art (New York: Grove Press, Inc., 1968), p. 126.

Regarding educators' use of electronic mixed media, suffice it to say that the majority are presenting elaborately illustrated lectures that seldom involve juxtaposition of separate elements to form a whole. Still, extensive research does exist on proper use of multichannel presentations in education; consult especially the articles in the bibliography by Stuart Cooney (1964), Alvin Roberts (1964), Daniel Smith (1967), Jerome Conway (1967), Werner Severin (1967), James Anderson (1968) (1969) and Donald Perrin (1969). Probably the most comprehensive study of educational multimedia was done by Donald G. Perrin (unpublished dissertation, University of Southern California, 1969). From the standpoint of classroom use of electronic media-mix, this study of Perrin's serves as a basic sourcebook of presentation methods, a concise handbook of technical information, and a relatively complete compilation of educational use and research in multimedia. Perrin's work also contains accounts of most major articles on educational multimedia found in the bibliography of this paper. Perhaps the best way to conclude these remarks on education and multimedia would be to pass on to educators the advice that electronic media should be used as an extension of the personality of each lecturer. In other words, "media should make you larger." [15]

The use of multiple images with taped or live narration was developed by the U. S. military in facilities designed for this purpose by the Tele-PrompTer Corporation in the late 1950's. While this is claimed as "multi-media" only by some military public relations men, similar presentations in the business world are often considered "multimedia" (see Sales Management September 21, 1962 for a sample). Generally these shows for businessmen consist of slides and/or film plus a taped lecture on the merits of some product or aspect of a company. These shows may be presented to executive boards, sales meetings and large conventions. Most often shows for businesses and industries are prepared under contract with a private "multi-media company." Another market for the 150-odd "multimedia companies" is the growing list of government agencies and civic associations who need shows about their organizations for fund-raising or volunteer-raising activities. Depending on availability of projection and audio equipment, a slide show is often more financially feasible for these organizations than producing a sound film.

IV. Description of the Study

This report is an attempt to describe and evaluate the historical evolution of multimedia (as defined in Section I of this Introduction). The main body of the report is devoted to descriptions -- as detailed as possible -- of not only those events categorized as multimedia but also many other events of a similar nature. These other mixed media events usually had relevant association with or influence on the actual multimedia presentations.

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[15] Richard B. Byrne, personal conversation, September 1971.

Chapter One contains developments "before the fact" as it were: developments that took place in the years 1900-1951, before Cage's 1952 "lecture." All events are placed in one of two general categories, Performance Environments or Display Environments. The distinguishing feature of the two general headings concerns the use or lack of live performers. Obviously, Performance Environments use performers while Display Environments use no true performers, although the latter often employ audiences, participants or lecturers to complete the event. Performance pieces are further subdivided as either Electronic Media and Performers or as Environmental Theatre. As is the case with all terms used in this study a category name has been chosen because of the emphasis indicated by its titles. Thus, Electronic Media and Performers indicates a theatre work in which the concentration is on the stage presentation, while Environmental Theatre events are those that emphasize the total environment rather than just the stage action.

Similarly the Display Environments are broken down into Multiscreen Presentations and Environments, with the events classified by their most distinctive element. A work can easily be a multiscreen environment, but these are usually grouped simply with the Multiscreen Presentations since these environmental-projection pieces depend on the images -- not the environment -- for their effects. Environments, as a subcategory, are those display works which need no entertainment from actors or images to account for their existence. Not every event to be discussed fits neatly within a category. Some had to be shoved into a section for lack of better placement. Appendix V contains charts of categorized events to be described in chronological order.

Each chapter will be divided into the four sections described above: (1) Multiscreen Presentations (2) Electronic Media and Performers (3) Environmental Theatre (4) Environments. The arrangements of these sections within a chapter is dependent on the importance of the events contained in each section. Chapter One begins with Multiscreen Presentations in order to bring Cineorama to its place of distinction, and Chapter Two starts with Environmental Theatre to pay tribute to John Cage.

Chapter Two deals with the early multimedia events in the period 1952-1960. Chapter Three deals with the rapid, far-ranging developments of 1961-1966. This period begins in January 1961 with The University of Wisconsin Multimedia Instructional Laboratory, and continues through the New York multiscreen displays of 1965. Two major events that occurred in New York during this period of expansion and discovery are treated in separate sections on the New Cinema Festival I and the "Nine Evenings of Theatre and Engineering." Chapters Four and Five, respectively, deal with the 1967-1972 period and concluding observations on the subject.

The first appendix is a discussion of terms and definitions. Appendix II is a chronological chart (as complete as could be compiled) of significant multimedia events and other events which have some bearing on the subject. All entries in the main body of the text are contained in this list, plus many others which are described only in Appendix II. If this appendix should appear to be thorough the reader should be reminded that no attempt has been made to catalog all events accepted by this author or any other writer as true multimedia. Such a cataloging would be a hopeless, thankless and useless task -- akin to listing all television programs ever broadcast. The events which are included would seem to be the most important ones in the evolution of this communication form.

Appendix III is more for reference than for direct relationship to the study. It is a chronological list of the more important technological advances in photography, motion pictures, projection devices, phonographs, color organs, audio recorders, radio, television and electronic music devices. This chart contains information of interest to a student of electronic media, if for no other reason than to show how sophisticated a range of devices was available to the forerunners of multimedia in 1900. The fourth appendix contains letters received by this author in his research on the subject. Their value lies in their indication of the degrees of cooperation a researcher in a contemporary subject must face. Appendix V is an informal index.

Possibly all receivers of the mass media are victims of a bias in books, magazines and newspapers toward New York City events; someone once said that you could gather 200 people with red flags upon a sidewalk in New York and next week's news magazines would report it as a major Happening. If this is the case, illuminating correspondence from other parts of the country and other nations would be highly beneficial to all concerned. Every reference of significance to the subject found by this author has been included in the bibliography; still, almost all of the events are retold from mass media accounts. Other discoveries that have occurred elsewhere remain the private knowledge of the creators and the participants. Hopefully, local studies of multimedia will soon be written, compiled and somehow distributed to present and future students of the subject.

V. The Passage from Intro to Body

Many excellent descriptions of the foundations of what now constitutes multimedia, Happenings, New Theatre, etc., have previously been written. A particularly good account of the progress from Cubism, Futurism, Dada, Surrealism and Bauhaus to Abstract Expressionism, Assemblage, Environments and Happenings is contained in Michael Kirby's Happenings (1965) from page 22 through page 46. Rather than replay the information here, a decision was made to offer a series of quotes from participants in these movements. Their words should indicate the unity of development described by Kirby and other writers.

> The only possible solution of the universal problem: the sovereignty of art and of revolutionary artists.[16]
>
> Tomasso Marinetti, describing his
> play Le Roi Bombance

> To complete oneself, to perfect oneself in one's littleness, to fill the vessel with one's individuality, to have the courage to fight for and against thought, the mystery of bread, the sudden burst of an infernal propeller into economic lillies.[17]
>
> Tristan Tzara, Dada Manifesto of
> 1918

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[16] Rosa Clough, Futurism: The Story of a Modern Art Movement (New York: Philosophical Library, 1961), p. 29.

[17] Robert Motherwell, The Dada Painters and Poets (New York: Whittenborn, Schultz, Inc., 1951), p. 79.

Surrealism is based on the belief in the superior reality of certain forms of association heretofore neglected, in the omnipotence of the dream, and in the disinterested play of thought. It leads to the permanent destruction of all other psychic mechanisms and to its substitution for them in the solution of the principal problems of life.[18]

Andre Breton, first Surrealist
Manifesto, 1924

We want to create a clear, organic architecture, whose inner logic will be radiant and naked, unencumbered by lying facades and trickeries; we want an architecture adapted to our world of machines, radios, and fast motor cars, an architecture whose function is clearly recognizable in the relation of its form.[19]

Walter Gropius, concerning the
intent of the Bauhaus, c. 1925

There is no such thing as empty space and empty time. There is always something to see, something to hear.[20]

John Cage, Silence (1961)

Not satisfied with the suggestion through paint of our other senses, we shall utilize the specific substance of sight, sound, movement, people, odors, touch. Objects of every sort are materials for the new art: paint, chairs, food, electric and neon lights, smoke, water, old socks, a dog, movies, a thousand other things which will be discovered by the present generation of artists. Not only will these bold creators show us, as if for the first time, the world we have always had about us but ignored, but they will disclose entirely unheard of happenings.[21]

Allan Kaprow, "The Legacy of
Jackson Pollack," (1956)

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[18] Patrick Waldberg, Surrealism (New York: McGraw-Hill Co., 1965), p. 72.

[19] H. H. Arnason, History of Modern Art (New York: Harry N. Abrams, Inc. 1968), p. 251.

[20] John Cage, Silence (Cambridge, Mass.: The M.I.T. Press, 1961), p. 8.

[21] Kostelantz, Theatre of Mixed Means, p. viii.

> Cubism, by seizing on instant total awareness, suddenly announced that *the medium is the message*. Is it not evident that the moment that sequence yields to the simultaneous, one is in the world of structure and of configuration? Is that not what has happened in physics as in painting, poetry and in communication? Specialized segments of attention have shifted to total field, and we can now say 'The medium is the message' quite naturally.[22]
>
> Marshall McLuhan, *Understanding Media* (1964)

> The artist must make use of the force of art, with its influence on human psychology, to communicate and to announce. He must find ways to come out of his isolation from his community. He must find ways to unite technology and the human condition. . . .He must find ways to investigate, to document, to criticize, to love . . .and so add meaning to the life we are all sharing.[23]
>
> Stan VanDerBeek, 1966.

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[22] Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1964), p. 13.

[23] Stan VanDerBeek, "Re: Vision," *American Scholar*, Spring 1966, p. 339.

Chapter One

The Pre-History: 1900-1951

I. Multiscreen Presentations

The ancestry of multimedia could certainly be extended into a long history of simultaneity in the arts. However, the first example of an event actually utilizing an electronic communication medium in a form that now expresses itself as multimedia was the Cineorama.display of the 1900 Paris Exposition. Some authors give the date of the Exposition as 1896, but the late film historian, Kenneth Macgowan, rather authoritatively described the event as taking place in 1900. Cineorama was a total 360° environment of ten screens; its creator was Raoul Grimoin-Samson, whose patent for the process was granted by the French government in 1897. Previously a patent had been given in England on October 6, 1894 to Joseph Train for a similar process. However, Train's "invention" remains an unreported mystery, and first-public-display honors for environmental cinema go to Grimoin-Samson.[24] Unfortunately, film histories usually pass by this grand event.

This 10-screen exhibition was huge in scale — a ratio of eleven to one in screen size — with the "screen" being 30 feet high and 333 feet around in a circular building. Spectators (200 at a time) stood in the basket of a hugh gas balloon with the mock-up balloon spreading high above them. Below the basket was the enclosed projection booth containing ten projectors. The images projected had been filmed from a balloon containing ten 70mm cameras set around the circle of the balloon basket. Thus the wrap-around film the spectators saw was the ground as their balloon "ascended," "traveled," and "descended." Since the film was in color (hand-painted), the audience was given the effect of a real balloon ride as they stood in the exhibition balloon basket. This grand event was short-lived; the police closed the exhibition after three days due to the fire hazard caused by the extreme heat in the projection booth.[25] After 1900, Grimoin-Samson went on to other interests and total-environment projection did not return until 1955.

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[24] Donald G. Perrin, "A History and Analysis of Simultaneous Projected Images in Educational Communication," unpublished Ph. D. dissertation, University of Southern California, 1969, p. 34.

Multiple-screen cinema was long and slow in developing. Only three other examples of this film form will be discussed in this section. One possible explanation for the lack of interest in multiple screens in early theatres is the fact that first-generation filmmakers still had some choice in frame size and could make their own wide frames for multiple images (in use since E. S. Porter's 1903 film AMERICAN FIREMAN[26]). Nevertheless, 35mm became the standard frame size long before the next display of multiscreen, so the absence of multiple screens from 1900 to 1927 still remains unexplained. In 1927, multiscreen returned in the form of a magnificent 3-screen film, NAPOLEON, by Abel Gance.

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[25] Kenneth Macgowan, "The Wide Screen of Yesterday and Tomorrow," Quarterly of Film, Radio and Television, Spring 1957, pp. 217-218.

[26] Ibid., p. 222.

NAPOLEON was made in 1926 and shown in Paris in 1927. The three screens put together formed a viewing area of 50-by-12 1/2 feet on which three equally-sized 35mm images from three projectors were shown.[27] NAPOLEON is accepted as the first — and possibly the only — example of Gance's multiscreen method known as Polyvision. There is one rather confused reference to a previous multiple screen Gance film, LA ROU (1923),[28] but no mention is made elsewhere of this film. The triptych effects of NAPOLEON were used in three basic ways: (1) to present a continuous panorama, (2) to flank a dominant center image with related side images (such as Napoleon's face in the center and marching armies on the sides), and (3) to mirror the central image with the side screens. Gance also used the triple camera developed by Andre Debrie[29] for dramatic cinema effects — such things as the landscape viewed from a runaway horse and a snowball hitting the lens.

Polyvision did have its problems. The cost of production and difficulty of showing NAPOLEON made the film a financial failure.[30] Complete synchronization of the three projectors was not possible at that time,[31] so the film used the center screen more than the triptych form. Gance was not even able to attract followers to his multiscreen process; his only disciple was Claude Autant-Lara.

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[27] *Ibid*., p. 223, and Sheldon Renan, *An Introduction to the American Underground Film* (New York: E. P. Dutton and Co., Inc., 1967), p. 62.

[28] David Curtis, *Experimental Cinema* (New York: Universe Books, 1971), p. 14.

[29] Macgowan, "Wide Screen," p. 223.

[30] Parker Tyler, *Classics of the Foreign Film* (New York: The Citadel Press, 1962), p. 27.

[31] Arthur Knight, *The Liveliest Art* (New York: New American Library, 1947), p. 305.

Some confusion seems to exist regarding Autant-Lara. One account credits him with developing a 3-screen process (one large center panel, two small flanking sides like a classic triptych), in 1927, known as Hypergonar.[32] Another account[33] mentions only his use of triple images on one wide frame of film — CONSTRUIRE UN FEU (1924-29).[34]

The next verifiable use of multiscreen cinema came in 1937 in the U. S. A. Fred Waller reached back to 1900 and partially reintroduced the environment concept of Cineorama. Waller's Vitarama used eleven screens of 16mm film in a semicircular format, but would have needed only five for a 35mm format. The project was originally intended for the oil industries' display at the 1939 New York World's Fair. Waller's interests in the effects of periferal vision led to his involvement with the hemispherical theatre; unfortunately for Waller, the oil men were not pleased with the concept, so Vitarama was not included in the Fair.[35] Some writers say that Eastman Kodak took up support for the project, but the Official Guide-Book makes no mention of Vitarama in any form at the 1939 extravaganza.

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[32] Perrin, "Projected Images in Education," p. 18.

[33] Macgowan, "Wide Screen," p. 224.

[34] Sources give varying dates. The confusion derives from the film having been begun in 1924 and not finished until 1929.

[35] Kenneth Macgowan, "The Screen's 'New Look' — Wider and Deeper," Quarterly of Film, Radio and Television, Winter 1956, p. 127.

Vitarama was not dead yet, though. The architect of the project, Ralph Walker, joined with Waller to form the Vitarama Corporation which built seventy-six 5-screen panorama gunnery training devices for the military during World War II. These 180° devices enabled a gunner to train his reactions so that he responded to several stimuli from different angles of his field of vision. Many men were better prepared against "blind" attacks due to the Waller device: the U. S. Government estimated that 350,000 casualties were prevented because of the effectiveness of the Vitarama training.[36] Vitarama was to return as Cinerama in the early 1950's, but that is a story for another chapter.

The only other significant use of multiple screens before 1952 was the traveling sales meeting developed by the Seagram Distillers Corporation in 1948. Inspired by a nationwide traveling display of Life magazine photographs in 1947, Seagram Distillers put together a show using five screens and live "drama." Accounts indicate that the actors were more like announcers, and the entire pitch was intended to present advertising concepts to salesmen.[37] For these reasons, this event has been classified as multiscreen rather than a true combination of film and live actors. The importance of this event lies only in its introduction of multiscreen presentations to the business world.

II. Electronic Media and Performers

Current New Theatre performances have benefited greatly from the sophisticated use of projections used in conjunction with live actors. The earliest use of live and filmed drama seems to have been in Japan in 1904.

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[36] Perrin, "Projected Images in Education," pp. 21-22.

[37] Stuart M. Cooney and William H. Allen, "Nonlinearity in Filmic Presentation: Part II, Discussion," Audio Visual Communication Review, XII, (Fall 1964), p. 305.

Film was introduced into Japan in December 1896, and its popularity was high by the turn of the century. In an attempt to spark better competition with the new entertainment, producers of the older Shimpa plays began showing film clips of plays at the cinema theatres. These cinematic ads soon found their way into the actual Shimpa plays. Mostly they were used as transitions between scenes; the screen was down for scene changes and another scene which had been filmed outdoors was then projected on the "curtain" screen. Occasionally actors stood behind the screen and spoke dialogue in a form of crude "lip-sync." Little more is known of this dramatic form except that it lasted a very short time. Film seems to have triumphed in the end, because indoor scenes were filmed, then joined with the outdoor shots and released as full-length features.[38]

Film and actors first came to the United States in the burlesque theatre, not on the "legitimate" stage. In 1909 Windsor McCay (creator of Felix the Cat) designed a stage act for himself and an animated partner named "Gertie the Dinosaur."[39] "Gertie" -- a hugh brontosaurus -- reacted to McCay's comments, followed some commands, and apparently "caught" pumpkins thrown to her by McCay.

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[38] Jeffery B. Embler, "A Historical Study of the Use of Film to Provide Additional Content to Theatrical Productions on the Legitimate Stage," unpublished Ph. D. dissertation, University of Pittsburg, 1971, pp. 52-53.

[39] Bob Thomas, The Art of Animation (New York: Golden Press, Inc., 1958), p. 8.

In Europe film entered stage drama to enhance live actors. The play Eine Million by Berr and Guillemand was presented during December 1911 in the State Theatre (Staattheater) in Posen, Germany. As in Japan, film was used as a transition between acts; one scene ended as the actor climbed out a window, then the projector started and the filmed actor continued on beyond the window. Also in Germany in 1911, at the Hamburg Operettentheatre's opening of the Rund um die Alster review, the principal actors were shown on film running through the streets of the city. The filmed introduction climaxed as the actors ran head-on into the theatre entrance, then the curtain rose and the same actors that had been in the film took a running leap into the audience.[40]

After a twelve-year interval, film returned to the European stage in the form of projected titles in Vsevelod Meyerhold's 1923 production of The Earth in Turmoil (see page 33). Meyerhold used filmed titles and commentaries again in 1924, as did Erwin Piscator, but it was finally Piscator who elevated the use of stage film to the status of a genuine dramatic element.

Piscator was the real pioneer of Epic Theatre, which he developed in various theatres in Germany in the 1920's. He founded the Proletarian Theatre in Berlin in 1920, worked in the Central Theatre 1923-1924, and then directed in the Volksbuhne from 1924-1927. While working at the Volksbuhne, he aroused heated controversy since his strong Socialist leanings were expressed in the propaganda pieces he aimed at his German proletariat audience.[41] In order to maintain artistic integrity, he opened the Piscator Theatre (Piscator-Buhne) on the Nollendorfplatz, Berlin, in the fall of 1927. This rented theatre was used since his Total Theatre, a radical design for the placement of projections and actors planned by Walter Gropius, was never built due to government interference and lack of money. At the Piscator Theatre he staged several productions that made excellent use of actors and projected images. However, Piscator's use of film as a unique element in a play dates back to 1925.

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[40] Embler, "Film on Legitimate Stage," p. 54.

As noted above, Piscator and Meyerhold had used filmed titles and commentaries in 1923 and 1924. Sergei Eisenstein used a short comic film as a separate element in a play he directed in 1923[42] (see Appendix II); however, Eisenstein's film was viewed as the sole action while the rest of the play ceased. Piscator found ways to incorporate the film into the play as the players continued the action. In the 1925 production of Felix Gasbarra's Trotz alledem (In Spite of Everything) at Grosses Schauspielhaus in Berlin, Piscator used newsreel films of war and its results. Commenting on this film Piscator said:

> These takes showed with brutality the horror of war: attacks by flame throwers, piles of slashed bodies, cities on fire. The 'mode' of war films had not yet become established and these photos served to shake and awaken the proletarian masses, more than would have been achieved by hundreds of statements.[43]

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[41] Maria Ley-Piscator, The Piscator Experiment: The Political Theatre (New York: James H. Heineman, Inc., 1967), pp. 69-77.

[42] Embler, "Film on Legitimate Stage," p. 58.

[43] Ibid., pp. 40-41.

There is also an unclarified statement by Piscator that he occasionally used slides in place of the newsreel. No matter what the nature of the projected images in this play, they were used throughout the performance, not at just one point.

Edward Kook's study, Images in Light for the Living Theatre (1963), includes a letter from Piscator in which the latter claims that his first use of film in theatre was on February 20, 1926, in Alfons Paquet's Sturmflut (Stormtide). This production, done at the Berlin Volksbuhne, may have held some personal significance for Piscator. Otherwise, there is no explanation for his neglect of his previous uses of film in the theatre.

Only rear projection was used in the 1926 play; this allowed the actors to play anywhere around the film without disrupting the image. One scene included film of a warship firing on a port. To enhance the feeling of depth, cutouts of the port's buildings were placed around and in front of the screen while actors were in front of the "port" and the screen background. Another example of film and actors uniting to increase depth was a scene of a crowd on film directly behind a crowd on the stage.[44] Thus, film was used to increase the cast as well as extend the environment. The 28-foot wide film images came from a projector 45 feet behind the screen. Four slide projectors were positioned 38 feet behind the screen, but nothing more is reported of their use.[45]

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[44] Ibid., p. 55.

[45] Ibid., pp. 147-148.

Piscator's use of film and slides together is one subject his biographers fail to elaborate. Possibly the slides were used only for projection of background scenery or titles, as was the custom in this branch of German theatre. Another possibility would have been the use of the projections as counterpoints to the message of the narrative. No accounts indicate that Piscator used his projections as communicative elements separate from the narrative. He even admitted that one of his chief reasons for using film was to enhance "the reality of people's environments."[46] Further research may prove Piscator to have been even more progressive. For now, however, he will continue to be regarded as a precursor rather than the father of multimedia.

After 1927, Piscator had his own theatre and nothing seemed out of place on his stage. His first production in the Piscator Theatre, Ernst Toller's Hoppla Wir Leben (Hoppla, We Live) opened on September 3, 1927.[47] A newsreel---compiled by Victor Blum and others---was shown to the protagonist (Thomas) to inform him of the world events of 1917-1927 that had occurred while he was confined to an insane asylum. Unlike the film in Sturmflut, the newsreel of Hoppla was treated as actual film viewed by the actor; it included genuine footage of such events as the beginning of the Russian Revolution (March 8, 1917), Mussolini's march on Rome (October 7, 1922), the Scopes Trial (July 20-21, 1925) and Trotsky's expulsion from the

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[46] Erwin Piscator, Political Theatre 1920-1966 (Arts Council of Great Britian, 1971), p. 52.

[47] Ley-Piscator, Political Theatre, p. 294.

Communist Party (November 1927). The newsreel ran seven minutes and concentrated on violence and political upheaval because Piscator felt "It was necessary to grasp the monstrosity of each epoch."[48]

Scaffolding had to be constructed for the six screen areas of the backdrop. One film projector and seven slide projectors were set up for front projection and another film projector was located 45 feet behind the 36-foot wide, 26-foot high screen area. A large scrim screen was placed in front of the actors so that it could be occasionally lit with images which would seem to envelop the actors. One such use of the scrim was to give the effect of Thomas in prison. A filmed sentry marched above him while the warden strolled about on another screen. This produced a three-dimensional effect around the live actor and carried out Piscator's policy of film to enhance environment.[49]

Piscator's zaniest and most commercially successful work in his Theatre was Jaroslav Hasek's The Adventures of the Good Soldier Schweyk. This satire concerned a lovable, loyal, stupid soldier who remained faithful to the army even in the most absurd situations. Among the films used in this play were the first animated cartoons used on a legitimate stage. These caricatures of military officers, clergy and doctors were done by the famed antiwar Expressionist, George Grosz.[50] In addition to film, such items as conveyor belts, cantilevered bridges, moving scenery, searchlights beamed on the audience, sound effects and motorcycles on stage were used, to the delight of the audience.[51]

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[48] Embler, "Film on Legitimate Stage," pp. 43-44.

[49] Ibid., p. 148 and Erwin Piscator, p. 56.

[50] Embler, Ibid., p. 73 and Ley-Piscator, Political Theatre, pp. 88 and and 294.

There were a few competitors for Piscator's prominence in Europe before everything was halted by the tragedy of World War II. On June 30, 1930, at the State Opera House (Staatsoper Unter der Linden) in Berlin, Franz Ludwig Hoerth staged Paul Claudel's Christophe Columb, with music by Darius Milhaud. The play concerned ritual (New World discovered by the Old Religion) and simultaneity (two characters of Christophe Columb -- one sails to the New World, the other is an old man looking back on his youth). Film was often used in this play to show the psychological workings of the minds of the characters. Such a sophisticated use of film had not been incorporated into the theatre previously.[52]

In Czechoslovakia, the talented director Emil Burian was working on the concept of total integration and orchestration of all theatrical elements. Unlike Piscator's grand effects, Burian's film and slides were thrown onto scrims and screens in front of and behind the performers to give a total union of film and actors. His stage was small (20 feet wide, 15 feet deep) so the 6-meter by 4-meter front scrim completely cut off the actors from the audience. Frank Wedekind's Fruhlings Erwachen (Spring's Awakening) presented in 1936 in the Prague Theatre was a typical Burian production.

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[51] James Roose-Evens, Experimental Theatre (New York: Universe Books, 1970), p. 50.

[52] Embler, "Film on Legitimate Stage," pp. 98-103.

Color slides were shown on the front scrim and on the screen upstage left from the actors, while black and white 16mm film also flooded the scrim. Descriptions of Burian's productions are insufficiently detailed to properly judge the context and effect of the film/slide/actor mix. Jarka Burian (no relation to Emil) says there was no true interaction between the projections and performers in the Prague theatre form, sometimes known as Theatregraph. Projections were used as supplements to the actors to create Burian's stage environment.[53] Thus the works of this great director have been presently classified as pre-multimedia; for him, the play was the thing, not the contributing elements.

In the U. S. A. Epic Theatre found popular appeal in the form of "Living Newspaper" plays produced by the Federal Theatre Project, headed by Hallie Flanagan Davis. These plays borrowed stage mechanics and style from Epic Theatre, then added dialogue taken straight from the mass news media. Between 1935 and 1939 over one thousand productions were staged in 40 states, but the strong political tone of the plays alienated Congress, who cut off funds in 1939.[54] A typical production was One Third of a Nation which opened on January 17, 1938, in New York's Adelphi Theatre. This play by Arthur Arent used loudspeakers and a filmed tour of New York City, with emphasis on the slums.[55] "Living Newspaper" films tended to be newsreels rather than dramatic elements to counterpoint the actors.

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[53] Ibid., pp. 106-112, 171, and Jarka Burian, The Sceneography of Josef Svoboda (Middletown, Conn.: Wesleyan University Press, 1971), p. 79.

[54] Oscar G. Blockett, History of the Theatre (Boston: Allyn and Bacon, Inc., 1968), pp. 635-636.

[55] Embler, "Film on Legitimate Stage," p. 133-135.

The only other significant use of film and actors before 1952 came in Czechoslovakia. Following the trails blazed by Burian, the talented director-designer team of Alfred Radok and Josef Svoboda worked with the combination of filmed and live drama. In 1951 they staged Samberk's comedy, The Eleventh Commandment at the Czechoslovakian Film Theatre in Prague. This production included a scene where a detective faced the audience, looked into a mirror so he could see a robber on film about to "shoot" him, then fired over his shoulder and "killed" the robber.[56] Such slick effects would re-emerge in 1958 as the famous Laterna Magika Show.

III. Environmental Theatre

This section is concerned with the development of total environment situations that involved dramatic performances of some type. All but one of the examples cited took place in theatres and only two made any use of projected film. The concept developed was one of audience involvement in the performance. This does not necessarily mean audience participation, but it does mean that the performance was somehow going beyond the idea of the spectators merely watching actors on a stage. In more recent times, this concept of events occurring in different parts of the environment would manifest itself first in Cage's 1952 "lecture" and then in the long series of Happenings initiated by Allan Kaprow.

The first noted example of the play coming out to the audience (discounting dubious parallels with pre-Elizabethan innyard plays) occurred in Moscow in 1910 when Vsevelod Meyerhold presented Moliere's Don Juan in the Alexandrinsky Theatre. Meyerhold continued his noble efforts in revolutionizing early 20th century theatre with this performance of Don Juan. His production had the following unusual elements: (1) no front curtain or footlights, (2) the forestage was extended into the audience, (3) the houselights were kept on during the performance, (4) costumed stage hands changed the props in full view of the audience and (5) the actors' dance movements were set to the music of Jean-Baptist Lully (the founder of French Opera, c. 1660-1670).[57]

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[56] Ibid., p. 120-121.

True Environmental Theatre seems to have begun in London on December 23, 1911 with the opening of Max Reinhardt's The Miracle. His production was adapted from the wordless play by Karl Vollmoller with a score by Englebert Humperdink. This play concerned the legend of Sister Beatrice, whose place in the convent was filled by the Virgin Mary while Beatrice was lured away by the pleasures of the world. Reinhardt, with the aid of Herman Dernberg, Rudolph Dworsky and Ernst Stern, transformed London's Olympia Exhibiton Hall into a Gothic cathedral. Real stained glass windows, wooden doors and stone columns added to the semblance of reality. In addition, a cast of 1,000, a chorus of 500 and a 200-piece orchestra made the production the most spectacular ever produced by Reinhardt. Costs for an 8-week run were about £40,000 but the enthusiastic crowds made the expense worthwhile. After a smashing success in London, Reinhardt toured Germany with his extravaganza from 1912 through 1914.[58]

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[57] Blockett, History of Theatre, p. 581.

Environmental performances must have seemed naturally suited to the spirit of the Dadaists, for they were quick to make use of unusual, scattered events at their public soirees. These wild collections of poetry readings and other gestures began in Zurich during July 1916 and soon spread to the metropolitan areas of France and Germany until Dada's decline in 1921. Two such soirees were called *Le celebre illusioniste* and *Noir Cacadou*;[59] they presumably occurred in 1916 or shortly thereafter. In the former, Philippe Soupault released balloons of different colors, each of which carried the name of a famous man, and Walter Serner placed a floral bouquet at the feet of a dressmaker's dummy. The latter performance featured Richard Huelsenbeck and Tristan Tzara jumping around in a sack with their heads in a pipe, Jean Arp reading his poems from inside a large hat, George Ribemont-Dessaigner dancing in a large funnel, and later, Huelsenbeck screaming his poems while Tzara beat time on a packing case. Other events were often accompanied by such "instruments" as rattles, keys and tin cans.[60]

Following the examples of Reinhardt and the Dadaists, the Russian directors Meyerhold and Eisenstein continued Environmental Theatre in the early 1920's. In February 1923, Meyerhold staged the play *Zembya Dybom* adapted by Sergei Tretyskov from Marcel Martinet's *The Night*. The play's title has been variously translated as *The Earth Rises*, *Earth on its Hind*

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[58] Oliver M. Sayler, *Max Reinhardt and His Theatre* (New York: Brentano's Publishers, 1926), p. 357 and Huntley Carter, *The Theatre of Max Reinhardt* (New York: Benjamin Blom, Inc., 1914), pp. 224-240.

[59] Michael Kirby, "The New Theatre," *Tulane Drama Review*, Winter 1965, p. 42.

[60] Roose-Evens, *Experimental Theatre*, p. 54.

Legs, The Restive Earth, and The Earth in Turmoil. Before the performance the audience participated in organized marching; then, during the play (about the Russian Civil War), soldiers used actual weapons — including small cannons -- presumably with blanks. Vehicles such as cars, trucks, motorcycles, and bicycles drove through the auditorium onto the stage for further realistic effects. At the finale the army arrived, took command of the auditorium, and everyone rose to sing the Internationale.[61] This play was also the first recorded instance of Meyerhold's use of theatrical film; he projected filmed titles above the stage.[62]

Eisenstein went a step further than Meyerhold by presenting Gas Works in the actual Moscow Gas Works in 1924. For this truly Environmental play, actors performed on the existing catwalks of the gas company. By 1925 Eisenstein had left the theatre for the cinema, employing the same principles of simultaneity in the film that he had developed on the stage. Thus, his second film, THE BATTLESHIP POTEMKIN (1925), is now a classic because of its montage of simultaneous events and viewpoints.[63]

Environmental Theatre in this country began on January 15, 1924, with the opening of Reinhardt's The Miracle in New York City's Century Theatre. As in London, the theatre interior was transformed into the illusion of a Gothic cathedral, this time by Norman Bel Geddes.[64] Again as in London, the successful run was hailed by enthusiastic crowds.

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[61] Michael Kirby, The Art of Time (New York: E. P. Dutton and Co., Inc., 1969), p. 143.

[62] Embler, "Film on Legitimate Stage," p. 88.

[63] Ibid., p. 21-22.

[64] Kirby, Art of Time, p. 139, and Sayler, Max Reinhardt, p. vii.

The next major example of Environmental Theatre in New York began on September 22, 1938, when the Olsen and Johnson review Hellzapoppin opened. Michael Kirby's description of this event, contained in his excellent chapter on "Environmental Theatre" in The Art of Time (1969) notes that the prologue of the review contained film of famous figures praising the show in dubbed voices — Hitler with a Jewish accent, Mussolini in Negro dialect. Thereafter much of the action occurred in the audience. Gags included barkers who sold concessions, souvenirs, and theatre tickets; a semi-nude man who watched from the upper balcony while sitting on a horse; and an orangutan who watched from one box while a man in a gorilla suit abducted a girl from another box. At one point, the house lights were doused and puffed rice was poured over the audience. Such antics surely were inspired by the absurd public exhibitions of the Dadaists. Later these concepts would find their way, in more refined form, to the various stages of the New Theatre.

IV. Environments

Environments have drawn inspiration from decorated interiors and exteriors throughout the entire history of the plastic arts. Contemporary Environments also include, as a basic idea, the notion of environmental alteration. None of the Environments discussed in this report were intended as permanent embellishments of existing spaces. Rather, these Environments were formed by adding different elements in original ways to transform — and occasionally obliterate — the existing physical environment. This area of the multimedia study commands a rather minor space until the USCO presentations of the mid-1960's; nevertheless, these examples of environmental alteration have had great influence on contemporary ideas about multimedia. Generally, multiscreen environments, such as Cineorama, are treated in the Multiscreen sections since these displays depend on the projections for the dominant effect.

Environments developed from collage and reached full scale in Kurt Schwitters' 1924 Merzbau in Hanover, Germany. Merz was the word chosen by Schwitters to describe the collage nature of all his work, so Merzbau was a Merz-house. He filled his home with lights, constructions, objects, sliding panels, and other paraphanalia. Unfortunately this Merzbau was destroyed by Nazi bombing in 1943, and his second one in Lysaker, Norway, burned in 1951. The only remaining example of true Merzbau Environment is the partially completed on in Amberside, England, begun in 1945.[65]

Habitation Environments came to the U. S. A. in 1930 when Clarence Schmidt began transforming his Woodstock, New York home. While Schwitters seemed confined to the interiors of existing houses, Schmidt dug out the hillside and added rooms as an earthworm adds segments. The Woodstock Environment has achieved a state of biomorphic growth and use of natural materials that both praises and spoofs Frank Lloyd Wright's principles of organic architecture. Rooms were added onto rooms ad infinitum and each room is heaped with forty years' accumulation of objects, photos, Christmas lights, stuffed creatures, toys and anything else feasible. Outside, Schmidt made a hugh grotto of trees, rocks, machines, tires, rowboats, mirrors and plastic statues. Such a place sounds like a sourcebook for Rauschenberg's combines of the late 1950's, but Schmidt was practically unknown by the art world until recent times. At last report he was still adding on to his creation.[66] Information on other American home-Environments can be found in the Blasdel article in the bibliography.

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[65] William S. Rubin, Dada, Surrealism and Their Heritage (New York: Museum of Modern Art, 1968), pp. 56-58 and p. 191.

In Europe, the only other significant event in environmental alteration (excepting the two World Wars) occured in Paris in 1938. During January and February of that year, the major show Exposition Internationale du Surrealisme was held in the Galerie Beaux-Arts. Andre Breton and Paul Eluard organized this monumental display of Surrealist art, and Marcel Duchamp designed the setting of the exhibition space. Leaves and moss covered the floor while 1200 sacks of coal hung from the ceiling. A pond and a bed were among the objects installed amidst the flora. During the opening festivities, the air was heavy with the smell of roasting coffee and the crowd noise was drowned out by German marching songs blasted over the public address system. Helen Vinel, a dancer, added to the occasion by performing a solo improvisation, "The Unconsummated Act," around the pond and bed.[67]

This chapter has shown how such ideas as multiscreen projection, film used in theatre productions, theatrical environments, and display Environments were all known and developed before 1952. All the items previously discussed (in addition to others contained in Appendix II) helped to further the different performance and presentation arts into distinct, contemporary modes of expression. In 1952, John Cage combined his knowledge of the preceding events with his ideas on chance and Zen philosophy to produce the first true example of the mixed media form known as multimedia.

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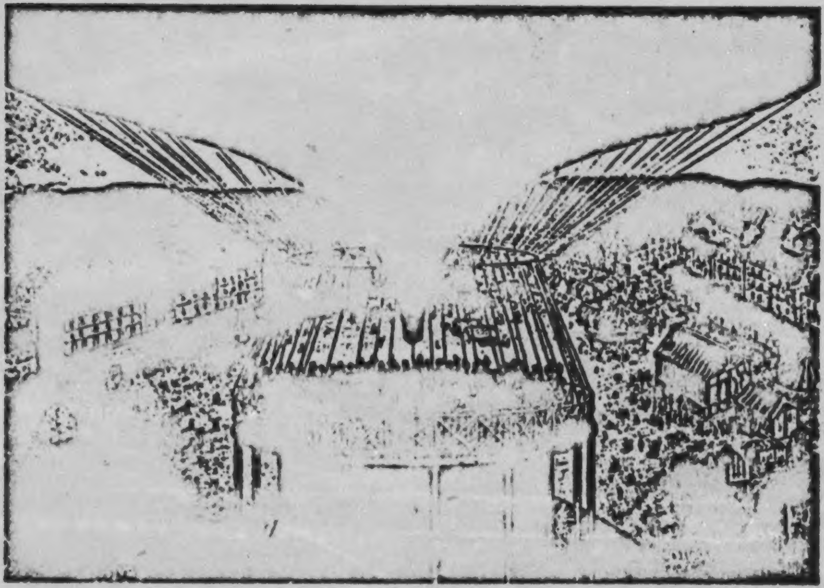
[66] Allan Kaprow, Assemblage, Environment and Happenings (New York: Harry N. Abrams, 1965), pp. 170-171.

[67] Rubin, Dada, Surrealism, pp. 152-153.



THE WORLD'S WIDEST SCREEN—1900. A contemporary drawing of Cinéorama at the Paris Exposition. The hand-colored motion picture thrown on the circular wall of the building by ten projectors beneath the audience apparently shows the descent of the balloon in Brussels. *(Courtesy University of California Press.)*

Chapter II

The Formative Years: 1952-1960

I. Environmental Theatre

It seems impossible to over-emphasize the importance of John Cage to multimedia. Even if he had not originated this new art/communication form, surely one of his students would have. Cage stands as a major figure in the present development of all 20th century art forms, either as a creator or as a strong influence. As is usually the case in history, Cage was the necessary "right man in the right place at the right time." By the middle of the present century, the performing arts had caught up with the visual arts in moving completely away from the illusionism of the narrative form. This does not mean that narrative works disappeared; it simply means that some branch of each performing art evolved a totally abstract form of expression which coexisted with the older narrative forms. Cage influenced music and dance directly (the effects on dance came through Cage's close friend, Merce Cunningham), theatre indirectly (Allan Kaprow was Cage's student when the former developed Happenings), and even the visual arts indirectly (Rauschenberg was a Cage student at the time of the 1952 "lecture," VanDerBeek was residing at Black Mountain College at the same time, and Gerd Stern met Cage at Black Mountain also).

So much has been written by and about Cage that there seems no reason to further expound upon the man here. One particularly good source of insight into Cage is his interview with Richard Kostelantz, printed in The Theatre of Mixed Means (1968). As usual, Cage speaks best of himself:

> I found through Oriental philosophy, my work with Suzuki, that what we are doing is living, and that we are not moving toward a goal, but are, so to speak, at the goal constantly and changing with it, and that art, if it is going to do anything useful, should open our eyes to this fact.[68]

Cage's much-referred-to presentation took place in the summer of 1952 at Black Mountain College, North Carolina, in the form of a 45-minute lecture. The combination of elements used in the lecture were carefully considered and orchestrated by Cage, but the point of entry of each element was determined by chance.[69] Cage's definitions of music and theatre are very broad (music consists of sound and silence, theatre consists of something to be seen and heard); therefore, the 1952 lecture is considered by Cage to be both music and theatre, since these terms have little, if any difference in Cage's philosophy. Other authors claim this celebrated event as the first Happening, Theatre Piece, Theatre of Mixed Means production, etc. To these is added the claim that it was the first true multimedia presentation.

Unlike the spectacles of Epic Theatre, where film and other projections were used to extend and enhance the basic theatre drama, Cage's lecture juxtaposed totally separate elements for a work that exists only in totality. Individually, the parts do not explain each other, yet taken together they form an entity. Consider the situation. All the viewers sat in chairs arranged in four large triangles facing the center of the lecture room as Cage began his talk on Meistor Eckhart. Then other events occurred as Cage continued to talk. M. C. Richards recited from a ladder, Charles Olsen and other "planted" performers in the audience stood and recited, David Tudor played the piano, Robert Rauschenberg played old records on a hand-cranked Victrola, and Merce Cunningham (accompanied by an unscheduled dog) danced around the audience. There was even a film — of the school cook and a sunset -- which was projected first on the ceiling, then on the wall.[70] Cage says there were also radios and slides used in the performance,[71] but no description of their use has been given. Above all this activity hung Rauschenberg's White Paintings. Seven Panels (1951) about which Cage has remarked, "The white paintings were airports for the lights, shadows and particles."[72] Concerning the entire 1952 event, Cage explained, "It was the making of theatre -- to bring all these things together that people could see and hear."[73] This monumental moment in the history of simultaneity in the performing arts ended with the words: "A piece of string, a sunset, each acts."[74]

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[68] Michael Kirby and Richard Schechner, "An Interview with John Cage," Tulane Drama Review, Winter 1965, pp. 59-60.

[69] Kirby, Art of Time, p. 86.

Further theatre by Cage was usually in the form that critics classed as music, so theatrical extensions of the 1952 event had to wait for the development of Happenings. Kaprow's first public Happening was not until 1959, but a group of Japanese — completely isolated from knowledge of Cage — did Happening-like performances as early as 1955. The Gutai Group, as they were called, was organized in Osaka in 1952 by Jiro Yoshihara.[75] Other members of the group were Akira Kanayama, Sadamasa Montonaga, Shuzo Mukai, Saburo Murakami, Kazuo Shiraga, Atsuko Tanaka, and Tsuruko Yamasaki.[76] This group appear to have originated the strange, non-matrixed type of theatre presentations now known as Events. One of their first public showings occurred in October 1955 at the Ohara Hall, Tokyo; at this performance Saburo Murakami broke through a series of paper screens with his hands and Kazuo Shiraga rolled in the mud. More elaborate showings included First Gutai Theatre at Asaki Hall, Tokyo, and Kankei Hall, Osaka, in May 1957, and Second Gutai Theatre Art at Sankei Hall, Osaka, in April, 1958. Examples of the Events from the first show were Murakami breaking a large paper screen with his hands and a club (similar to his 1955 work) and Akira Kanayama inflating a giant balloon which changed colors until he cut it in two.[77] Odd as these Events might seem, they certainly were not scoffed at by the American avant-garde. For some idea of the scope of theatre Events in the U. S., see the Winter 1966 issue of Film Culture for a long listing of Events and Event creators — Japanese, American and European.

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[70] Michael Kirby, Happenings (New York: E. P. Dutton and Co., Inc., 1965), pp. 31-32.

[71] Cage, Silence, p. x.

[72] Alan R. Solomon, Robert Rauschenberg (New York: The Jewish Museum, 1963), p. 7.

[73] Kostelantz, Theatre of Mixed Means, p. 56.

[74] Cage, Silence, p. x.

On Sunday, December 8, 1957, the activities of the Gutai Group made the front page of the art section of The New York Times.[78] Some have speculated that this publicity had some direct influence on the origins of

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[75] Martin Cohen, "Japan's Gutai Group," Art in America, November-December 1968, p. 88.

[76] Kaprow, Assemblage, p. 210.

[77] Ibid., pp. 212-216.

[78] Kirby, Happenings, p. 29.

American Happenings, but the first Happener, Allan Kaprow, did not know of the Japanese group until 1960.[79] Kaprow's only Oriental influence appears to have been the interest John Cage held in Zen philosophy and the I'Ching. While studying with Cage at New York's New School for Social Research from 1957 to 1959, Kaprow developed both of his major creations: (1) the gallery Environment in 1957 (a public version of Merzbau) and (2) the Happening in 1958 (first done at Douglas College, Rutgers University, New Brunswick, on April 15, 1958).[80]

Kaprow's first public Happening was presented at 8:30 pm, October 4, 1959, at the Rueben Gallery, New York City. This was the work called 18 Happenings in Six Parts, the script for which had been published earlier the same year in the Rutgers Anthologist. Three "rooms" were created in the gallery by means of plywood frames covered with translucent plastic sheets; lighting was provided by clusters of 25-watt blubs, and some action painting-collage (reminiscent of Kaprow's paintings) was included on the walls of room I. Spectators — all of whom came by invitation -- sat in folding metal chairs arranged in the three rooms and changed positions as indicated by the instruction sheets handed them upon entering. The action took place in six units with three Happenings occurring in each unit. Since the Happenings occurred simultaneously in different rooms, the spectators had to compare observations to find out what had gone on in all parts of the setting.

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[79] Kaprow, Assemblage, p. 224.

[80] Allan Kaprow, pp. 21 and 42.

Kirby's Happenings (1965) contains a complete script and an eyewitness account of the event, so it would be redundant to repeat it here. For this study, it is enough to know that four tape decks with separate sound tracks, a phonograph and projected slides of nudes, Kaprow's paintings, children's art, collages and other paintings were all used during the performance, separately and simultaneously. Unlike the semi-spontaneity of current Happenings, this primary work was rehearsed for two weeks prior to the opening. It was also presented six times (October 4th and 6th-10th) instead of the present practice of one-shot presentations[81] (a practice now advocated by Kaprow).

Many early Happenings made some use of electronic media, although it was often in the form of taped background sounds. One performance that made especially good use of film was Robert Whitman's The American Moon presented in November 1960 at the Rueben Gallery.[82] For this Happening the spectators entered the gallery through a plastic-covered tunnel, then sat in one of six smaller tunnels, also covered with sheets of black plastic. Once the viewers were seated in their tunnels, they found themselves facing a central performing space. At various times during the piece, screens of clear plastic and typing paper were lowered to cut off the tunnels from the central space. An 8mm projector in each tunnel showed a film on the makeshift screen; when the lights in the center area were turned off, the viewers in each tunnel could see the film on the screen of the tunnel directly across the central performing area.[83]

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[81] Kirby, Happenings, pp. 68-75.

[82] Ibid., p. 139.

Whitman and other Happeners continued to use electronic media in their works well into the 1960's. Still, Happenings and multimedia seem to have gone their separate ways since Kaprow's 1959 work. Most of the significant uses of electronic media in Happenings has been concerned with the New Theatre form of film and actors in juxtaposition. These other Happenings are discussed in either Chapter III or Appendix II.

II. Multiscreen Presentations

1952 was not only the year of the Cage lecture; it also marked the return of multiscreen films. After the wartime success of Vitarama, Fred Waller redeveloped his product for theatrical purposes in 1949. Hollywood producers were not interested, so the Vitarama Corporation's assets changed hands to become Cinerama Incorporated. Mike Todd and Lowell Thomas took the financial step that other producers had avoided, and the first Cinerama film, THIS IS CINERAMA, opened in New York on September 30, 1952.[84] The 3-screen format of Cinerama was similar to Gance's Polyvision with two major exceptions: (1) in Cinerama the film was shot on one complex camera with three interlocked lenses and shown with three interlocked projectors, Gance did not have the necessary equipment in order to possibly achieve such technical perfection; (2) Cinerama was commercially profitable for a long enough period of time to encourage construction of theatres equipped to handle the presentation, Polyvision was a financial disaster from the start.[85]

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[83] Gene Youngblood, Expanded Cinema (New York: E. P. Dutton and Co., Inc., 1970), p. 381.

[84] Perrin, "Projected Images in Education," p. 23.

Economic competition from regular cinema theatres (which would not bear the expense of reconversion for the new process) eventually drove Cinerama practically out of business. Cinemascope began in 1953, and the scale of the wide screen -- easily installed in a conventional theatre -- stole most of Cinerama's thunder. Another weakness of Cinerama was its lack of development as a valid cinematic form. Unlike Gance, who combined separate scenes on his three screens, the directors of Cinerama used only the wide panorama effect. The novelty of this limited mode soon wore off for the mass audience and Cinerama faded as progressive cinema. Nevertheless, the thousands of people who saw Cinerama in the 1950's and 1960's were much better prepared to accept the multiscreen works of today's Expanded Cinema.

A more significant use of multiple screens was the "sample lesson" designed by Charles Eames and George Nelson. Nelson explained that in 1952 Lamar Dodd, Chairman of the Fine Arts Department of The University of Georgia, asked Nelson's help in structuring a more effective educational policy. Nelson brought Eames into the project in the fall of 1952, and they recommended a radical program for efficiency in teaching. Rather than let students spend weeks on a project just to rediscover art principles, Eames and Nelson suggested the use of electronic media in large lecture situations. The faculty were not enthusiastic, so Eames, Nelson and Alexander Girard agreed to produce a sample lecture (on "Communications") for the hypothetical course — "Art X."[86]

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[85] Knight, Liveliest Art, p. 290.

The final production was named "A Rough Sketch for a Sample Lesson for a Hypothetical Course,"[87] and included films by Eames, slides by Nelson and a traveling display by Gerard. Equipment used was one 16mm projector, three slide projectors, three screens, several tape decks and canned odors of incense. No exact date of the first showing is given; January 1953 seems to be the date Nelson indicated in his article on the event. As to whether this lecture should be classified as mixed media or multimedia is open to question until more specifics are known about the nature of the soundtrack. Nelson's description is the most complete published, and he gave the impression that the lecture was a series of separate films and slide shows. At any rate, this presentation carried as much significance for the education world as Cage's 1952 lecture carried for the art world. After this "Georgia Experiment" (which was also presented at U. C. L. A. in 1953),[88] educators gradually began to realize the possibilities of electronic media as more than supporting players in a lecture.

By 1961, The University of Wisconsin installed a facility that answered Nelson's dream of packaged lectures of sound and visuals. Nelson had hoped that such lectures could be centrally produced and then delivered to many schools. This hope is now also realized to some extent. However, most educational "multimedia lectures" are still local, impermanent, and varying in quality. One further note should be recalled concerning the "sample lesson" of 1953. Nelson admits that three screens of slides were used because a single wide-screen film would have been too costly to produce.[89] This economically-realistic attitude reveals the underlying weakness that still plagues educational multimedia when compared to theatrical multimedia. Educators have long known that audio-visual aids are invaluable in the classroom if for nothing else but their attention value. It follows that the more attractive the various media presentations are, the better will be the attention paid by the students. Even though learning may be no more effective with electronic media, studies have shown that students generally prefer media-augmented lectures to traditional lectures. When faced with the problem of tight school budgets, educators soon saw that multiple-screen slide shows would be a natural companion for rented films as cheap, easy and attractive presentations. Only recent research and serious study of multi-media have begun to elevate its use in education to the aesthetic level of many theatrical experiments in multichannel communication.

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[86] Nelson, "Art X," pp. 44-45.

[87] Schrader, "Films of Eames," p. 3.

[88] Renan, American Underground Film, p. 229.

In 1955 multiscreen finally came full cycle back to the 360° environment of Cineorama. The modern revival, called Circarama, was a joint project of Walt Disney and American Motors. Basically, it was an 11-screen travelogue in a circular building. A crowd of about 350 looked above their heads at a screen 8 feet high and 130 feet around, broken by strips into eleven screens. One 16mm projector behind each strip threw an image onto the screen directly opposite.[90] The show presented always used all eleven screens for a complete panoramic view of the American countryside. As indicated, the content of Circarama made no advances over the basic concept invented in 1900.

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[89] Nelson, "ArtX," p. 46.

One of the two most progressive uses of multiscreen in the 1952-1960 period was the series of Vortex concerts conducted by Henry Jacobs and Jordan Belson at Morrison Planetarium in San Francisco's Golden Gate Park. Few of the current light shows could possibly be as spectacular as these Vortex works. Belson installed interference-pattern projectors, strobes and kaleidoscope projectors for increased visual imagery in addition to the star machines, color controls and other existing planetarium devices. All of these were used in conjunction with abstract film images made by Belson and James Whitney. Jacobs had control of the sound, which came from almost fifty speakers in the 60-foot dome. Originally there were thirty-six loud speakers clustered in groups of three around the surface of the dome; in addition, there were two bass speakers on each side of the dome, plus one at the top. Jacobs installed a few more speakers plus a master control board that allowed him total direction of the sound. Any single speaker or cluster could be the sole sound source at any time, so a very sophisticated interplay occurred between Jacobs' sound and Belson's images. Jacobs could also rotate the sound quickly around the room, hence the name Vortex for the concerts. Audio tracks included electronic music by Jacobs, Stockhausen, Berio and Ussachevsky and polyrhythms of the Balinese and Afro-Cuban cultures.[91]

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[90] Macgowan, "Wide Screen," pp. 219-220.

The enthusiasm of both men was unbounded concerning their creation. Belson was quite excited about the use of images with no frame lines. These projections seemed to float in space while the color of the environment went from cold black to the warmest saturated hues. Belson remarked:

> Vortex is a natural tie-in with intellectual, aesthetic, and philosophical developments of our time, which calls for a new awareness by the artist and esthetician of what is happening in the world of science, where the scientist is unveiling visual imagery so provocative in itself -- apart from its immediate scientific merits -- that a new philosophy is developing.[92]

Jacobs was no less restained in his comments: "It was such an absurdly perfect situation that we just stopped altogether after we left the planetarium; when you begin with the ultimate, there's nowhere else to go."[93] This first spectacle in the short history of multimedia began in May 1957 and continued until 1960. After a hundred magnificent concerts (including two weeks at the 1958 Brussels World's Fair), Morrison Planetarium withdrew support and Vortex suffered an untimely death. In the early 1960's, light shows returned — this time with rock bands — but few of the new environments could equal the quality of Vortex.

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[91] Youngblood, Expanded Cinema, pp. 388-391.

[92] Robert Pike, A Critical Study of the West Coast Film Movement (Los Angeles: University of California at Los Angeles, 1965), p. 161.

[93] Youngblood, Expanded Cinema, p. 388.

Unknown to the general public in the late 1950's, multiscreen also came into use by the U. S. military on a permanent basis. TelePrompTer Corporation designed a military briefing room consisting of a 5-screen rear projection system and audio tape to facilitate information transmission; this configuration of one large center screen with two small stacked screens on each side was known as Telemation.[94] Briefings could be completely automated, with film and slides coming up at appropriate points during the taped lecture. Manual control was also possible, so an officer could punch up his own visuals as he talked. In either case the rear projection system allowed the room lights to remain on for note taking. There is no indication that these briefings were anything but illustrated lectures; however, the success of Telemation in these installations led to similar facilities which greatly enhanced college teaching in the early 1960's.

Multiscreen usage in the period discussed in this chapter achieved its greatest recognition at the Brussels World's Fair of 1958. Of the events described so far, three were in operation at the Fair: (1) Vortex concerts (2) Cinerama in the Attractions Pavilion and a Russian Pavilion version known as Panorama (3) Circarama in the American Pavilion, with an 18-minute film on American culture. The Brussels Universal and International Exposition, which ran from April 17 to October 19 on a 500-acre park in

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[94] Perrin, "Projected Images in Education," p. 84.

Brussels, attracted some 41 million visitors[95] who saw eight separate multiscreen displays. In addition to the shows previously mentioned, there were Aviorama, Congorama, Kenneth Anger's INAUGURATION OF THE PLEASURE DOME, Laterna Magika and Polyekran.

Aviorama was designed by the Milan engineer Luige Maretti. It utilized three screens -- one in a normal position, one tilted down above the first, and one tilting up below the middle screen. The audience sat on three sides of the pit around the lower screen; projectors were located in the back of the hall, in the pit and in the ceiling. Little more is written about the content of the presentation. Presumably some combination of images besides a vertical panorama was used. Albert Ducrocq's Congorama also seems to have been an exercise in design rather than a serious attempt at content cinema. This display had side wing screens, lighting effects, sound effects and sliding walls all controlled by an "electronic brain" -- presumably a computer.[96] Kenneth Anger's film INAUGURATION OF THE PLEASURE DOME, was shown at the Brussels Experimental Film Festival as a 3-screen presentation; this was not done again in later years, possibly because the three projectors were in proper synchronization only once in all rehearsals and showings of the film.[97]

The other truly progressive multiscreen work mentioned earlier as a companion to the Vortex concerts was the Polyekran display designed by

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[95] Gerson H. Lush, "Brussels International Exposition," Britannica Book of the Year 1959 (Chicago, 1959), pp. 123-125.

[96] Perrin, "Projected Images in Education," pp. 37-38.

[97] Stan Brakhage, "A Moving Picture Giving and Taking Book," Film Culture, Summer 1966, p. 49.

Josef Svoboda. Seven film projectors and eight slide projectors synchronized to audio tape presented a 10-minute, 8-screen show concerning the Prague Spring Music Festival.[98] Rather than a multiscreen equivalent of a multi-image film, Polyekran incorporated direct interplay between the natures of still and moving images. One scene from this show featured a filmed dancing ballerina jumping from screen to screen; then she was suddenly "frozen" as a still slide on one of the screens, while other action continued on other screens. Such a use of projections and sound to present a narrative with no help from live actors was a fine refinement of the Eames-Nelson presentation five years earlier. The physical arrangement for Polyekran was a small stage lined with black velvet. Two of the trapezoidal screens hung tilted from the ceiling, two were tilted up from the floor, and the others were arranged at eye-level. Spectators watched Polyekran from low stools. Svoboda intended his show to be a collage of separate images rather than a simple multi-image narrative;[99] such an intent is what distinguishes a multimedia work like Polyekran from a simple mixed media piece like Congorama.

In 1959 Charles Eames re-emerged with another multiscreen presentation, this one a real spectacular. For an American exhibition in Moscow, Eames (aided by John Whitney) put together a 7-screen slide show with each of the seven as large as a drive-in theatre screen.[100] The display was a result of an exchange of national exhibitions by the U.S. and the U.S.S.R. Kinopanorama (described below) was featured at the Russian exhibit, held in the New York City Coliseum from June 30th to August 10th, 1959. About one million Americans saw this super version of Cineorama. In Moscow's Sokolniki Park from July 25th to September 4th, the American exhibit was housed in a 78-foot high geodesic dome. Included in the 30,000 feet of display space were Eames' slide show, large displays of American culture (including the site of the famous "kitchen debate" between Richard Nixon and Nikita Krushchev), and a separate, movable dome to house the ever-heralded Circarama. Close to three million Russians toured this American pavilion.[101]

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[98] Jarka Burian, "Josef Svoboda: Theatre Artist in an Age of Science," Educational Theatre Journal, XXII, May 1970, p. 133.

[99] Perrin, "Projected Images in Education," pp. 38-39 and Burian, Scenography of Svoboda, p. 81.

Eames' presentation, Glimpses of the U.S.A., was shown on seven TV-shaped screens,[102] each one 20 feet high by 30 feet wide, stacked in a configuration of four above and three below. Many slides (2,200 in all) were used to present an all-encompassing view of American life. Hundreds of the slides were taken directly from popular American magazines to give an honest picture of U.S. culture. Accompanying the slides was a simple, non-editorializing narrative.[103]

The Russians also had an exhibit in Moscow to accompany the American dome; Kinopanorama was featured at the pavilion, as it had been earlier in New York. Kinopanorama was a very impressive replay of Cineorama. Twenty-two screens arranged in two rings of eleven screens each surrounded 300 spectators. The lower screens were 12 feet high and 90 feet around; the upper ones rose 13 feet above the lower level and were tipped forward at a 59° angle. Skyline on one level and sky as rockets blasted up into the second level were among the effects possible with the two-layer arrangement. Mirrors were also employed to eliminate the dead areas where cameras did not perfectly match-frame.[104] One Russian critic called the display a "montage" indicating the possibility that multiple images were employed.[105] If so, Kinopanorama advanced beyond the constant 360° panorama of Circarama and Cineorama; if not, the Russian exhibit was merely a grander version of the earlier forms.

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[100] Youngblood, Expanded Cinema, p. 208.

[101] Wallace L. Littell, "Fairs and Exhibitions," Britannica Book of the Year 1960 (Chicago, 1960), pp. 246-247.

[102] Schrader, "Films of Eames," p. 5.

[103] Perrin, "Projected Images in Education," p. 41.

One other use of multiscreen from the 1952-1960 period should be mentioned. In 1960 Standish Lawder made his original version of a 30-minute, 2-screen slide and audio tape show called The March of the Garter Snakes. Beginning with photographic slides of various sorts (single and multiple images, natural and abstract forms), Lawder progressed to "sandwich" slides -- two pieces of glass containing such materials as lipstick, butter and fingernail polish. These slides were left in the projectors until the heat caused the ingredients to burn, buckle, bubble and otherwise produce movement from a still format. Lawder presented his "marching snakes" often in the mid-1960's.[106]

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[104] Ibid., pp. 34-35, and Cooney and Allen, "Nonlinearity," p. 306.

[105] Cooney and Allen, Ibid., p. 306.

[106] Film Culture, Winter 1966, p. 8.

III. Electronic Media and Performers

Only two significant uses of projections and live performers were reported in the period under consideration; both examples were designed by Josef Svoboda. Another hit of the 1958 Brussels Fair was Svoboda's Laterna Magika show. Although film and actors had been used before by Svoboda and Alfred Radok, Laterna Magika was the smoothest blend ever made of this type of media interplay. Not only were there interchanges between live performers and projected images, but the screens were also as mobile as the actors. Eight screens occupied the 50-by-24-by-20 foot stage while three film projectors and two slide projectors threw images to all parts of the performance area, including the rear wall which served as a wide screen for rear projection. The screens could either move, change size or fold up completely, depending on what effect best suited the script. Multispeaker stereo sound accompanied this presentation which was devised by Radok and realized by Svoboda. As with The Eleventh Commandment, projections and live elements were interdependent so that only juxtaposition of the two gave a total work.[107]

Laterna Magika consisted of twenty-four separate units, totaling about two hours' performance time. One act featured a man dancing in front of a film of Czechoslovakian mountains; then a filmed ballerina was superimposed over the mountains and the dancer "carried" his partner for the rest of the dance on a large, white tray held under her feet. Another scene involved Czech actress Sylvia Danickova speaking to two filmed images of herself. One image spoke French, the other spoke Flemish and she responded in English. Thus, a simultaneous appeal was made to speakers of both Belgian national languages and to American tourists. After emerging as one of the favorites of the Fair, Laterna Magika went on the road to Prague, Moscow and London.[108]

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[107] Burian, Sceneography of Svoboda, pp. 83-85.

From an aesthetic point of view, Laterna Magika had one big problem which still exists. The magnificent technique of the show was used to carry scenes of very frivolous content. Even Jarka Burian, an admiring biographer of Svoboda, admits that Laterna Magika has not yet advanced past the stage of a travelogue.[109] Stan Brakhage has also recorded a similar opinion, that the show had great technique but in the end was just a meaningless government production.[110] It would seem that Radok and Svoboda were not encouraged to tamper with the commercial success of Laterna Magika. It must not be forgotten, also, that this touring show was government sponsored and financed. Most ventures of that type are judged by the sponsor on mass audience appeal, not avant-garde criticism.

Fortunately for the development of multimedia, the principles of Laterna Magika were transferred to the legitimate stage by Svoboda. The classification of the original form as multimedia is, admittedly, tenuous, but this entertainment showcase does emphasize a different use of electronic media than the giants of Epic Theatre employed. Recalling the discussion on film and actors from the previous chapter, the author notes that most early uses of film in the theatre were for scene transitions, newsreel effects, and titles. Piscator's Sturmflut made use of film to extend the perspective and Burian's Fruhlings Erwachen created a sea of projections that engulfed the actors. Burian's use of electronic media came the closest to the idea of juxtaposing media messages with live actors. Still, the reports of all these events indicate that Laterna Magika alone went far enough with the combination of actors, films, slides and sound to be considered multimedia. Epic Theatre used electronic media to enhance a play that existed without the projections. Laterna Magika has no existence without both electronic media and live actors.

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[108] Perrin, "Projected Images in Education," p. 39.

[109] Burian, "Josef Svoboda," p. 138.

[110] Brakhage, "Moving Picture Book," p. 49.

An even better dramatic use of the Laterna Magika technique was Svoboda's October 1959 production of Josef Topel's Their Day. In this play the stage was equipped with nine mobile screens, each of which was covered by two slide projectors. Three of the screens were also used for projection of film. Often film was projected on the black velvet curtain at the rear of the stage, so that the image was visable only when crossed by a moving screen. As the play — about youth encountering the situations of the city -- progressed, the screens presented "a mosaic of city life"[111] which had active and passive relationships to the actors. Svoboda called the play "a confrontation of selected realities."[112]

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[111] Svoboda in Burian, "Josef Svoboda," p. 139.

[112] Ibid., p. 139.

IV. Environments

The concluding section of this chapter will be brief since Environments of 1952-1960 are relatively unimportant to this study. Allan Kaprow produced his first Environment during this period, but it has diminished in significance when viewed with the retrospect of Merzbau and Happenings. Environments for Kaprow turned out to be a necessary transitional step from action-collage to Happenings. In searching for ways that his Environments could even further alter the physical surroundings in which they were shown, Kaprow gave the spectators actions to perform, and soon Environments had evolved into Happenings.[113] The first Environment was produced in an abandoned barn near Kaprow's New Jersey home and transported to New York's Hansa Gallery, (cofounded by Kaprow) for display, March 11-29, 1958.[114] This work was filled with hanging sheets of plastic, cellophane, colored cloth, Scotch tape and painted surfaces of various sorts. Taped electronic sounds from five separate decks played for 15 minutes every hour as people wandered through the maze.[115]

The only other work from this period to be discussed is Robert Rauschenberg's Broadcast (1959). Until the mid-1960's Rauschenberg had little to do with the actual development of multimedia. His importance lies in the general influence he exerted on the contemporary art world, which led to some aspects of multimedia. His combines of paint, objects, fragments and collage date back to the mid-1950's. These constructions surely indicated to Kaprow the direction the latter would take away from the confines of traditional painting. Rauschenberg's large silkscreens with repetitions of photographic images (early 1960's) look like a documentation of a multiscreen projection show. He was also one of the first artists to incorporate functioning machines into his paintings, so as to produce environmental alteration in his section of a gallery.

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[113] Kirby, Happenings, p. 46.

[114] Allan Kaprow, pp. 21 and 42.

[115] Kirby, Happenings, p. 46.

One such example of machine use was Broadcast (1959). Three operating radios were put behind the surface of the canvas so that the tuning knobs projected out for the viewers to change stations at will. The painting's colors were originally planned to be bright and loud; however, the final version was more achromatic in order for the looking and listening to occur in time rather than simultaneously.[116] This led to a later piece (Oracle, 1965) in which five sound sources were located in different parts of a room. The progression of such display environments into true multimedia came through the work of USCO, which will be discussed in the next chapter.

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[116] Andrew Forge, Rauschenberg (New York: Abrams, 1969), pp. 111-117.

Chapter Three

Emerging Spectacle: 1961-1966

I. Multiscreen Presentations

January 1961 marked the opening of the University of Wisconsin's Multimedia Instructional Laboratory. The success of this operation led to the current multimedia saturation of the education world and to the cultural popularity of "multimedia" as the name for multiple screen and sound shows. Professor John Guy Fawlkes, the former dean of the University of Wisconsin's School of Education, originated the laboratory based on a similar facility he had seen at the World Agricultural Fair in New Delhi (1960). The show Fawlkes saw in India was a 5-screen Telemation display built for the U.S. Departments of State, Agriculture and Commerce. Since the Fair ran from December 1959 through February 1960,[117] surely many thousands besides Fawlkes saw the Telemation presentation; still, few seized the opportunity for innovative development, and Fawlkes was one of the few with a vision for the future.

TelePrompTer Corporation was called in to install a Telemation system at the University of Wisconsin as a permanent step toward more effective teaching. Previous success with this type of system in military instructional situations surely was the deciding factor in installing such an expensive facility. Remodeling the existing small auditorium into the

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[117] Richard D. Hubbard, "Telemation: AV Electronically Controlled," Audio Visual Instruction, November 1961, p. 437.

Laboratory cost $17,000 alone; purchase of equipment cost $30,000 more and installation of the new audio-visual gear ran another $33,000.[118] Onto a 7 1/2-foot-by-14 1/2-foot rear projection screen, images poured forth from a 16mm Bell and Howell JAN sound projector with Xenon light, two 99-slide capacity Du Kane 2-inch-by-2-inch slide projectors, one 59-slide capacity TelePro 6,000 3 1/4-inch-by-4-inch slide projector with a 3,000 watt blub, a television projector, an opaque projector and an overhead projector. Sound came from a turntable, a stereo audio-tape system, and/or the lectern microphone. The lectern had controls for all equipment, plus rheostats for the room lights and a height control for the lectern itself. Lectures could be completely automated (machines activated by punch-card signals which were cued by audio tape signals), semi-automated (machine-control cards activated by punched holes in the script sheet as it ran through the teleprompter), or manually controlled from the podium.[119]

Since the Laboratory was set up independent of any department, a full-time staff was hired to produce lectures for the faculty. An average show took about 120 hours of preparation, excluding initial research and conceptualization by the professor. So, even though there was a large enough staff to finish two new shows per week, a lecture was usually planned six to eight weeks ahead of the needed time. After the concept of each production was determined by the instructor and the program designer, faculty assistants would gather material from which the artist and the photographer would make slides. A programmer added any other requested visual material and put the finished show into final viewing order. Quantity of production kept the costs down to an average of $300 for one 50-minute automated presentation.[120]

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[118] Gerald F. McVey, "Multimedia Instructional Laboratory," Audio Visual Instruction, February 1966, p. 85.

[119] Ibid., p. 82, and Hubbard, "Telemation," pp. 437 and 438.

The first lecture presented in the Multimedia Instructional Laboratory was on January 30, 1961 by Professor Michael B. Petrovich for his Russian History course. Students were enthusiastic about the new facility so other professors were soon utilizing the Laboratory and producing permanent lectures that could be updated from time to time. Over the course of a few years, the heaviest users of the installation were Russian History, Art Survey, Human Abilities and Learning, History of the Theatre and History of Motion Pictures. Many similar facilities were installed on college campuses in the mid-1960's; even high schools and colleges that could not afford massive installation or rennovation costs made new use of multi-screen/audio tape lectures, so "multimedia" was soon alive and running. The Wisconsin facility seems to have been the first Telemation unit which did not bear the trade name. A source who requests no identification says that the name "Multimedia" was suggested by an employee of the lab as a catchier alternative to Telemation. TelePrompTer Corporation was never able to set the public straight.

Two other examples of multiscreen educational presentations were the "Think Box" designed by Kenneth Issacs in late 1962 and "An Approach to the Civil War," designed for a high school history class in mid-1964. The

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[120] McVey, _ibid_., p. 81.

"Think Box" was a 12-foot cube into which four speakers and twenty-four slide projectors poured an environmental barrage of sights and sounds. Issacs called the interior overload Matrix and used the cube as a true "learning environment" to show interrelationships of many facets of a subject.[121] The Civil War presentation was developed by Alvin B. Roberts and Don L. Crawford of Western Illinois University to illustrate the advantages of a total media approach to a lesson. In addition to a 3-screen slide, film and tape show, the complete unit plan contained other films, tapes, records and diagrams for various types of classroom activities.[122]

Multiscreen presentations were available for the large audiences at the World's Fairs of 1962 (Seattle) and 1964 (New York). These events are discussed in Appendix II since the shows at these Fairs were technically impressive but otherwise no advancement over previous multiscreen works. More significant works were done in 1964 and 1965 by USCO, Don Snyder and Aldo Tambellini.

In early 1964 the nucleus of what would later be called the U S Company (USCO) traveled from San Francisco to Woodstock, New York, presenting various versions of their Verbal American Landscape show. The Company at this time consisted of Gerd Stern, his wife Judy, Michael Callahan, and whatever gear could be carried in their car. Compared to later USCO extravaganzas, this show was rather mild, using only four slide projectors, four speakers of taped sound, and three 16mm films — one film of a December 1963 event called Destruction (where participants brought cherished objects before a panel of judges who decided if the objects should be destroyed), one film of the "Contact is the Only Love" display and another film called Y. The performance at Salt Lake City's University of Utah set off a major scandal for the university administration since the Y film was judged to be lewd by the local John Birch Society chapter. Y juxtaposed highways and highway signs with closeups of a nude woman; the soundtrack was a mix of highway sounds and orgasm sounds. Needless to say, the stay in Utah was short.

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[121] Kenneth Issacs, "Think Box," Industrial Design, November 1962, pp. 48-51.

[122] Alvin B. Roberts and Don L. Crawford, "Multiscreen Presentations: Promise for Instructional Improvement," Audio Visual Instruction, October 1964, pp. 528-530.

Other, more calm engagements were at the University of Oregon (Eugene, Oregon, January 1964), Carleton College (Carleton, Minnesota, April 1964), and the University of Wisconsin at Madison (April 1964). Since the show depended on house equipment and student participation wherever it was presented, the physical arrangement of each showing was different. At the University of Wisconsin a significant improvement was made with the use of the Kodak Carousel slide projector, now a standard item in most multimedia presentations. Since the previous versions of Verbal American Landscape had used manual slide projectors, the pacing of the slides had been dependent on the dexterity of the projectionist. With the Carousel projectors, a new slide could be flashed every second from the circular tray of eighty slides.

In early October of 1964, the Verbal American Landscape was shown to an audience of 500 at the University of Rochester. This performance was historic for the USCO troupe for two reasons: (1) the Rochester showing marked the first time the group was known as USCO (originally condensed from "Company of US"), (2) all projectors and sound equipment were furnished by USCO. In addition to the two tape playback decks and four speakers acquired by Callahan, there were four Kodak Carousels (mounted on tripods to straddle auditorium seats) donated by Paul Williams and two 8mm projectors bought by USCO to show the films made by Steve Durkee. As before, at least one 16mm film and a collage soundtrack were used. The main tape was called the "Billy Master" -- referring to Billy Holliday -- and this was a collection of speech fragments from personalities who had influenced Stern. Beginning with cuts from 1932 speeches by Franklin D. Roosevelt, the tape worked its way up through Timothy Leary and Marshall McLuhan. McLuhan also spoke in person before the 1964 show in Rochester, then he and the USCO members answered audience questions after the V. A. L. presentation. In April and May of 1965, V. A. L. was given at Brandeis University, adding an oscilloscope, strobe machines and diffraction machines to the previous media elements.[123]

A very impressive multimedia work called Spectra-Mach I was produced by Don Snyder in mid-1965. Synder had already achieved fame for spectacular effects with abstract-pattern dissolve slide shows (one image fades out as the next image fades in) when he created the larger scale of Spectra-Mach I. Four 16mm projectors, two 4-track audio tape decks, and four slide projectors were necessary for this production. It was done first in June 1965 as part of the "Psychedelic Explorations" festival of the New Theatre of New York City. Later showings the same year included the New Cinema Festival I (November), followed by a repeat at the Film-Makers Cinematheque, December 7-12.[124]

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[123] USCO, "Our Time Base is Real," Tulane Drama Review, Fall 1966, pp. 80-81 and personal correspondence with Gerd Stern and Michael Callahan, February 1972.

Aldo Tambellini evolved his previous experiments in multimedia into a masterwork called Black Zero in 1965. This production involved hundreds of hand-painted black and white slides and films, all involving some variation of the black/white circle theme. A large black balloon, again representing the "black zero" concept, slowly emerged, grew, and burst to climax the presentation. Sound consisted of taped electronic music, plus the occasional use of live, amplified cello music.[125]

The USCO presentation at the New Cinema Festival I (see page 84) served as the prototype for Hubbub, a grandiose, 2 hour work utilizing four film projectors (two 16mm, two 8mm), four Carousel slide projectors, stroboscopes, an oscilloscope, live "dance" by the painter Steve Durkee, and a 12-track stereo tape blasted over four speakers. Hubbub was presented on December 7, 1965, at the Rhode Island School of Design, on December 9th at the Massachusetts Institute of Technology, on December 12th at the State University of New York at Buffalo, and on January 18-23, 1966 at the Film Maker's Cinematheque in New York City. Six movements -- CATHODE RAY, HIGHFREETHRUSAFEWAY, Y, GHOST REV, DIFFRACTION FILM, and OMIX -- constituted the show; the second and third movements were carryovers from the Verbal American Landscape, while the others were made either for the Ghost Rev show at the New Cinema Festival I or made especially for Hubbub. DIFFRACTION FILM, made by Jud Yalkut (who joined USCO in 1965), was shot through a multidiffraction filter and accompanied by sounds of water, birds and frogs. OMIX was a strong, simple use of the oscilloscope combined with sounds of a heartbeat and chanting of the Hindu holy word "OM." Other sights and sounds from the total work included people walking in cities, slogans, road signs, screen celebrities, common objects, commercial products, highway images, Beatle songs, speeches, and television ads. Reactions were mixed at all the performances, with the R.I.S.D. students being the most hostile even though this audience was given an additional element — live rock music from The Overwhelming Odds.[126]

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[124] Film Culture, Winter 1966, p. 8.

[125] Youngblood, Expanded Cinema, pp. 381-383.

II. Environmental Theatre

No study of multimedia would be complete without a description of [illegible] first USCO presentation on November 12th and 14th, 1963, at the San Francisco Museum of Art. The group was not known as USCO at the time, but the principal members of the later commune (Gerd and Judy Stern, Michael Callahan, and Steve Durkee) participated in the first show, known as Who R U and What's Happening? Stern's one-man show at the Museum of Art (including "Contact is the Only Love") opened concurrently with the multimedia presentation, the latter originally conceived as a means of defraying part of the expenses of the "Contact" octagon. Stern now admits that this first performance was a bit ambitious for its time in USCO's development, but its magnificent impact overshadowed its unresolved technical problems.

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[126] Personal correspondence with Stern and Callahan, April 1972.

On the stage of the Museum's auditorium, Stern constructed four transparent plastic booths, each of which held four people (including Allan Ginsberg). The booths were connected by microphone to the sound system mixer and by telephone to a stage panel of four sociologists, headed by Dr. Howard Becker. Each sociologist was isolated from the room's sounds by headphones, so his conversation with his booth was carried on without knowledge of the other speakers. In addition to the conversation generated by the people in each booth (who did not know each other before entering the booths, hence the title of the work) there were sounds broadcast to the audience -- sounds from tapes, sounds from video broadcasts, public telephone messages (time, weather, lost dog reports) and amplified sounds of the audience themselves. All of this was mixed on stage and fed to four speakers, one in each corner of the auditorium. Two of the booths had closed-circuit television broadcasts to stage monitors; in addition there were other stage monitors which showed commercial broadcasts. Four manually-operated slide projectors, located in the aisles of the auditorium, filled the stage screens with examples of the Verbal American Landscape -- photographs of words from news media and street signs. All of this was received well by the audience, who eagerly participated (one man even unplugged the telephone jacks several times), but the review in the San Francisco Chronicle panned the event. Much of the criticism centered on the fact that the hall's natural reverberation caused frequent feedback in the sound system.

A simpler version of the same show was given at the University of British Columbia, Vancouver, in January 1964 at the annual arts festival. This Vancouver show was actually the trial version of the _Verbal American Landscape_. The Canadian presentation used only four slide projectors, two tape decks, and the 16mm film Y. Another participant at the Vancouver festival was Marshall McLuhan, who was a major influence on the works created by Gerd Stern. A report by McLuhan to the National Association of Educational Broadcasters (the basis of his book _Understanding Media_) had been eagerly read by Stern in mid-1963. McLuhan's reaction to the Vancouver presentation was not enthusiastic at first, but better rapport was soon established between Stern and McLuhan.[127]

One of the few events of the mid-1960's to exceed the spectacle of the USCO performances was the production of Karlheinz Stockhausen's _Originale_ in September of 1964. Judson Hall (across 57th Street from Carnegie Hall in New York City) served as the location for this lavish extravaganza. The room was a small, rectangular auditorium with mirrors on one wall, a small balcony at one end and a small stage at the other — before the transformation. For the performance, a large metal scaffolding for people and equipment was erected directly across from the mirrors, and chairs were put on the stage and in clusters around the floor area.

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[127] "USCO," _Tulane Drama Review_, pp. 78-79 and personal correspondence with Stern and Callahan.

Allan Kaprow directed the 94-minute production that looked to be utter chaos, even though all entries and actions were carefully regulated by the time on a large central clock. The Stockhausen score, Kontakte, consisted of street sounds, static, and instruments; it was performed by audio tape accompanied by Max Neuhaus on percussion and James Tenney on piano. Other activities included Allan Ginsberg praying to Krishna, Michael Kirby hawking newspapers, Robert Breer running a TV camera and receiver and also showing one of his films, people yelling through bullhorns, and other people feeding goldfish in hanging bowls. One girl stripped to her underwear while members of the audience were pelted with leaflets, dried beans, pink toilet paper, and rotten green apples. Most of the audience showed enough spunk to throw the apples back. At the next-to-last of the five nightly performances, the scheduled dog and chimpanzees were delayed in traffic, so a lady and her blind dog were brought in off the street. She had been associated with the Futurists in Milan years earlier and thoroughly enjoyed Originale. Reports indicate that a good time was had by all, except Nam June Piak, who was handcuffed to the scaffolding by some pranksters at one performance.[128]

Another big event in the field of Environmental Theatre was Robert Whitman's The Night Time Sky. Given in May 1965 at New York's First Theatre Rally (organized by Steve Paxton and Alan Solomon in TV studios at Broadway and 81st Streets[129]), Whitman's production certainly contained one of the most memorable climaxes in all of cinematic history. At the beginning of the show, the audience moved through a tunnel while ship noises were heard. A large tent-like structure of white sheets was at the end of the tunnel, and a film of a ship leaving port was projected on the sheets. The spectators pushed aside the cloth "door" covering to enter the central dome, 50 feet in diameter and 17 feet high. Lighting came from outside the tent, changing the entire environment from green to red as films and sounds simulated the open sea and a boiler room. At various times people appeared in holes in the dome to perform actions. A girl in one of the openings played several records; another girl projected glass marbles with an opaque projector. For the finale a film was shown on the dome, giving the spectator a view up through a toilet seat as a man dropped his pants, then dropped huge feces toward the audience. Whitman said the spectators left, "fertilized by the experience."[130]

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[128] Kirby, Art of Time, pp. 99-102 and pp. 114-115, and "Stuffed Bird at 48 Sharp," Time, September 18, 1964, p. 81.

[129] Mekas, Village Voice reprints, p. 11.

In 1966 the rock-band light show hit New York in full blast. As mentioned earlier, this phenomenon began in the late 1950's on the California coast (and can be traced back in principle to color organ recitals in the late 19th century), but little documentation of actual presentations of light shows appears until early 1966 in New York City. The Velvet Underground, a raunchy rock group who were uninhibited enough to sing about heroin and sado-masochism, presented one program of live music and projections at the New Cinema Festival I in November 1965 (see section V, this chapter).

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[130] Robert Whitman, "The Night Time Sky," Tulane Drama Review, Winter 1965, pp. 101-107.

After the new year began, the Underground were found appearing on the same bill as a series of 2-screen Andy Warhol films generally known as the "Uptight" series.[131] In early April of 1966 the Dom nightclub (23 St. Mark's Place) in Greenwich Village became the temporary home of the sight and sound barrage known as the "Exploding Plastic Inevitable."[132] Properly, the "Exploding Plastic Inevitable" referred only to the projections, which were three simultaneous films. Usually this name was also applied to the total show which contained music by the Velvet Underground and the singer Nico, "whip" dances by Gerald Malanga and partners, and flashing color and strobe lights. After about a month's stay at the Dom, the entire troupe made a tour of Los Angeles, San Francisco, Cincinnati, Minneapolis, and London.

The World, featuring twenty-one screens of film, slides and closed-circuit video coordinated by USCO was the first successful permanent venture of this type in New York, despite initial association with the disk-jockey idol, Murray the K. The World premiered on April 1st, and The Cheetah was open by the end of the month.[133] By 1967 psychedelic rock clubs had spread nationwide.

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[131] Bosley Crowther, "The Screen," The New York Times, February 9, 1966, p. 32. One of these films, MORE MILK, YVETTE, shown on February 8, 1966, at the FilmMakers Cinematheque, featured a transvestite "movie star" eating a hamburger with milk while the other screen showed a man being whipped. Later the Velvet Underground performed and films were projected around them.

[132] Rainer Crone, Andy Warhol (New York: Praeger Publishers, 1970), p. 31, and Marilyn Bender, "Black Jeans to Go Dancing at the Movies: It's Inevitable," The New York Times, April 11, 1966, p. 47.

[133] Earl Wilson, "It Happened Last Night," The New York Post, April 28, 1966, clipping with no page number, and personal correspondence with Gerd Stern and Michael Callahan.

One of the few reported multimedia events that occurred outside of the U. S. happened on October 24, 1966, in Buenos Aires. The work was Marta Minujin's mammoth multi-mass-media Happening Simultaneity in Simultaneity. Although the original piece was quite complicated, perhaps it can be summarized as follows. A week prior to the actual event, a group of sixty local celebrities came to a TV studio and were filmed and photographed as they entered. Near midnight of the 24th, thirty-five of these same celebrities returned to the same TV studio, dressed as they had been the week before. Each entrance was broadcast to home viewers who knew of the event from previous publicity. As a celebrity entered the studio on the night of the performance, filmed front shots from the preceeding week were shown on the back wall of the studio; filmed rear shots were shown on the front wall, and a series of nine side-view slides were projected on the studio's side wall. After each entrance display, the person was given a transistor radio and instructed to sit in a chair facing a TV set.

At 12:04 am the studio participants and home viewers all watched the same 10-minute videotape and listened to the broadcast on Radio Municipal and Radio Libertad (switching stations was required to hear the entire broadcast). 500 home viewers received a simultaneous telephone call ("You are a creator. Look at your environment.") and 100 of these people also received telegrams ("You are a creator." signed "Simultaneity in Simultaneity") while they watched three TV celebrities receive telephone calls and telegrams. Marta introduced the TV celebrities, but no sound was heard since her speech had been printed in that day's newspaper. Original plans for the event to be even larger in scope failed to materialize when calls from Allan Kaprow in the United States and Wolf Vostell in Germany did not come through by way of satellite. There were even some unrealized plans for international air travel by the three Happeners during the course of Minujin's presentation.[134] All in all, this Happening remains as one of the most impressive, original uses of multimedia or mass media.

III. Electronic Media and Performers

Only two or three of the electronic-media theatre events from the period under consideration have been classified as multimedia. The other examples of this theatrical form would be more properly called mixed media exchanges between actors and a film. Some of these New Theatre presentations were quite impressive and have been often redescribed in print. Following is a brief look at the more important ones.

Roberts Blossom and Robert Whitman have probably done as much significant work with film and live actors as anyone else in the New Theatre. Blossom has presented examples of what he calls Filmstage since 1961. Jonas Mekas recalled that one such example of Filmstage, done at New York's Living Theatre in 1961, combined the live presence of Blossom with his image on film and slides and his voice on audio tape. Other works by Blossom include Duet for One Person (March 1963), Unresolved (1964), and A Rehearsal (1965).[135] Presumably, some of these presentations could be called multimedia, while Whitman's works all seem to be the mixed media form of performers in relation to themselves on a single film. Water, by Whitman, was given in Los Angeles on September 20th and 21st, 1963; this was one of his earliest pieces in which the film-actor interchange was exploited. Water was basically a Happening which the audience watched from a vinyl cubicle as the participants were drenched with artificial rain and colored liquids. A film projected onto a sheet in the performing area showed a girl in different solid-color dresses. The same girl, clothed in a wet print dress, stood in front of the projector so she was fused with her image.[136]

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[134] Michael Kirby, "Marta Minujin's 'Simultaneity in Simultaneity,'" The Drama Review, Spring 1968, pp. 147-152.

[135] Mekas, Village Voice reprints, p. 10, and Roberts Blossom, "On Filmstage," Tulane Drama Review, Fall 1966, pp. 68-73.

Of course, no section on projections and actors would be complete without at least one entry by Josef Svoboda. The work cited in this chapter is Svoboda's production of the Luigi Nonno opera Intoleranza. Presented in Boston (February 1965) with cooperation from the Boston Opera Group, this work was Svoboda's only major dramatic production in this country -- Laterna Magika, shown at the 1964 New York World's Fair and at Hemisfair, could hardly be called legitimate theatre. Intoleranza utilized four video projectors on three 12-foot by 16-foot screens, and a large screen at the back of the stage was used for rear projection of film. In addition to projected video tape images, there were also closed circuit projections from two house cameras (one covering the stage, one on the audience), and remote broadcasts from two studios up to three miles away. One studio broadcast additional actors (who monitored the stage actors) while the other provided special effects. Among the projection effects used were images in negative form and 30-second delay replays of the stage action -- so a performer could respond to himself.[137]

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[136] Kirby, Happenings, pp. 173-183.

The most unique of the film-actor presentations of this period was the work called "Unmarked Interchange" done by the ONCE group in 1965. For a festival called "ONCE AGAIN" at Ann Arbor, Michigan, they erected a drive-in type screen on the roof of a parking garage and showed the Fred Astaire-Ginger Rogers film TOP HAT. During the film, panels and drawer-like sections of the screen opened to reveal people performing diverse actions. One man read pornographic sections from The Story of O, and a girl walked across a narrow catwalk to throw custard pies in his face; another man played a small piano, while a couple sat at a table with a candlelight dinner. All sounds were amplified along with the film's soundtrack, so the end result was a controlled chaos of action and interaction. This event marked one of the few times since Piscator's newsreels that film not made for a production was used in a theatre piece.[138]

Other uses of electronic media and performers took place at the New Cinema Festival I in November 1965. These events are discussed in section V of this chapter.

IV. Environments

By 1961 Allan Kaprow was turning from Environments to Happenings, and Rauschenberg had moved from combines to silk screens. Some other artists continued in the tradition set by Kaprow and Rauschenberg; sculptors were usually more successful than painters, however. About the only major painter of the mid-1960's who extended forms off of his canvas in any significant manner was the Pop artist, Tom Wesselman. His "Great American Nude" series, done 1962-1964, put the nudes into one-wall rooms furnished with real objects. The grander versions had functioning TV sets, fans, radios, and ringing telephones. Possibly #54 of this series was the most magnificent, combining an 84-inch by 102-inch canvas with a real radiator, wall phone, desk and chair, and a window complete with artificial foliage and taped street noises.[139]

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[137] Burian, Sceneography of Svoboda, p. 103.

[138] Kirby, Art of Time, pp. 122-123.

Two sculptors who became synonymous with environmental settings in the mid-1960's were George Segal and Edward Kienholz. Both of these men have been connected to Pop Art by occasional critics, but neither of them properly belong in that category. Most likely their use of real objects in their sculptural environments has been mistaken for an interest in Pop iconography. Segal worked in New York concurrently with the cream of East Coast Pop; still, his inclusion of real objects and structures in his work was more for enhancing the mood created by his figures than for incorporating symbols of popular culture. Many of his environments used walls and furniture that had no trademarks of any kind. Segal structured lonely spaces populated by isolated figures. His white plaster people were cast directly from the models, so the sense of reality was indeed eerie. Famous Segal environmental sculptures included a gas station (with Coke machines and tire rack), a washateria, and a woman shaving her legs in her bathtub. His earliest works of this type (example, Dinner Table) began appearing about 1961.[140]

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[139] Lucy R. Pippard, Pop Art (New York: Frederick A. Praeger, 1966) pp. 111-114.

The sculpture of Kienholz is surely as striking as that of Segal; it may even be more memorable because it is so grotesque. Kienholz did not stop with merely putting objects into his environments. He altered the objects and created strange juxtapositions that are like nightmares compared to Segal's interiors. One of his first full environment tableaux was Roxy's (1961). This was the ghastly re-creation of a 1943 Las Vegas bordello complete with a madam crowned with a horse's skull. Kienholz's most celebrated Environment was The Beanery (1965) featuring seventeen dummy figures -- each with a large clock for a head -- inside a ghoulish, but actual, beanery hut.[141]

The man who brought environmental sculpture into the realm of multi-media was USCO's leader, Gerd Stern. His beatnik poetry of the late 1950's evolved into poetry collages by 1961, and in December 1962 he had a show at Allan Stone's New York gallery. This show was arranged by the painter Steve Durkee (a friend of Stern's) and included collage poetry and kinetic poetry (words in conjunction with machinery, images, and lights). The climax of Stern's kinetic poetry came a year later at the San Francisco Museum of Art with the opening of his one-man show on November 12, 1963.

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[140] Kaprow, Assemblage, p. 36.

[141] Maurice Tuchman, "A Decade of Edward Kienholz," Artforum, April 1966, p. 41.

In addition to works from the Allan Stone gallery show, some new collages, and a bending mirror piece, Stern had the completed version of his 7-foot octagon "Contact is the Only Love." This complex work had involved months of fund raising and work by Stern, Michael Callahan, and Roger Summers. Incandescent, neon and florescent lights flashed such highway ideas as "Yield," "Turn Ahead," and "Go On Go On." These signs operated at rates that varied from once a minute to 480 times per minute, while rotational sound on both sides of the octagon played a radio-rock-station music collage familiar to many highway drivers. The completed work was made of two-sided masonite-faced plywood (Harborite) and supported by a concrete-filled tractor tire.[142]

By the mid-1960's, even industry had entered the field of display Environments (not to be confused with the multiscreen displays occasionally used by government agencies and businesses since the late 1950's). One of the more impressive Environments constructed for an industrial fair was seen at the XIIIth Triennale in Milan during 1964. This particular exhibition building, called "Introductory Section — Leisure Time," was executed by Vittorio Gregotti, Lodovico Meneghetti, and Giotto Stoppino, all of Milan. After touring the introductory room of leisure paraphenalia — toys,sports gear, etc. — visitors entered a huge, stark room of gleaming metal stairways (that led nowhere) and walkway tubes. Passage through the tubes led to the dark "Corridor of Instruction," where visitors sat to see slides of advertising slogans. Mirror images of dummies mounted on the ceiling were also a rude shock for the viewer. The final chamber, "Calediloscope," was an octagonal room 34 feet high and 79 feet long. All the surfaces were highly reflective, so when two 9-minute films were shown, the viewers were emerged in color and movement.[143]

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[142] Mekas, "USCO," p. 3 and personal correspondence with Stern and Callahan.

At least passing mention should be made of Robert Rauschenberg's Oracle (1965) since it was his only piece of true environmental sculpture. After he made Broadcast in 1959, Rauschenberg experimented with different means of making an environmental sound piece. First he tried five painted panels which would conceal speakers, but this project was abandoned and the panels were retained as the painting Ace (1961).[144] Collaboration with Bell Laboratories engineer Billy Kluver finally resulted in a successful work. Rauschenberg gathered objects from the public dumps of New York City (his usual method of working) and equipped them all with sound.[145] Four of the objects -- a funnel-shaped industrial duct, a window frame with a duct, a car door, and a staircase-console (with hanging rubber tire) -- were mobile, and the fifth, a cistern that pumped water through a shower spray into a tank, was stationary. All of the objects had radios which could be tuned and adjusted in volume by remote control from the console. Each radio was also capable of automatically changing stations at a set speed.[146] After 1965, Rauschenberg generally moved away from all painted and sculptural forms in favor of experimental theatre pieces.

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[143] Wolfgang Clasen, Expositions, Exhibits, Industrial Trade Fairs (New York: Frederick A. Praeger, 1968) pp. 72-75.

[144] Forge, Rauschenberg, p. 117.

[145] K. G. Pontius Hulten, The Machine (New York: Museum of Modern Art, 1968), p. 189.

[146] Forge, Rauschenberg, pp. 117-119.

The USCO group warrants a final entry in this section because of their fine exhibition at the Riverside Museum in New York City from May 8-June 19, 1966. Four rooms of the museum were filled with paintings, sculpture, weavings, silkscreen posters, kinetic poetry (including "Contact is the Only Love"), and presentations based on electronics, lights and taped sounds. This exhibition served to integrate all aspects of all previous work done by the diverse members of USCO; the chaotic barrages of the Verbal American Landscape and Hubbub were now balanced by meditation chambers of lights and art objects. Occasionally some collage and kinetic poetry displays accompanied the road shows, but not since the San Francisco Museum display and show of 1963 had the many facets of USCO been brought into such total harmony. The exhibit had originally been called a "be-in" (the first use of that word), but is now remembered as "Down by the Riverside," after the title of the film made by Jud Yalkut of the exhibition.[147]

V. New Cinema Festival I

The November 1965 festival at the FilmMakers Cinematheque (Astor Place Playhouse, 434 Lafayette Street) was known as the New Cinema Festival I.[148] The festival lasted for several days and included many diverse avant-

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[147] Personal correspondence with Stern and Callahan.

[148] "The Talk of the Town," The New Yorker, December 4, 1965, p. 52.

garde works. Among the pieces presented were some already discussed: Standish Lawder's March of the Garter Snakes, Don Synder's Spectra-Mach I, and a segment of Blossom's Filmstage featuring dancers, slides projected on the dancers and film projected in the background.[149] Also mentioned was the participation of the Velvet Underground in Part III ("The Mysteries of the Essence Chamber") of Angus MacLises' Rites of the Dreamweapon. As the Underground blasted away with rock music, a stageful of strange objects was lit by a revolving red-green beacon. People danced and walked on the stage at random while two projectors beamed on a thin screen in front of the stage. One of the projectors had no film and the other contained a short film loop of unrecognizable images. Occasionally, the projectors swiveled around the room to illuminate the walls and the spectators; frequently the projector lenses were covered with various colored filters.[150]

Multiscreen's chief exponent at the Festival was Stan VanDerBeek with three multiple projection works. Move Movies used four film projectors, three slide projectors, and a flashlight. Two of the projectors faced screens on the stage, while the other five were carried around by assistants who often beamed the images onto the audience. Feedback #1: A Movie Mural employed five film and three slide projectors and two tape decks; this piece filled the entire auditorium with images and sounds, much to the delight of the audience. Pastoral: et al was a dance piece in which the dancers carried miniature screens that received films of more dance by Elaine Summers and Bert Supree.[151]

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[149] Mekas, Village Voice reprints, p. 12.

[150] "Talk of the Town," p. 52.

One of the classic dance and film works, Ed Emshwiller's Body Works, was also included in the New Cinema Festival I. Emshwiller's presentation featured four dancers in white costumes onto whom were projected images of themselves from three 8mm projectors and two 16mm projectors, all hand-carried. Three portable screens and one fragmentation mirror were also used in this excellent 30-minute performance.[152]

Ranking with Body Works as a monumental film-dance mixed media work was Robert Whitman's Prune Flat. Interaction between live performers and their filmed counterparts was so identical at times that reality became a very confused issue. Throughout most of the performance, two stage actresses matched action with their film doubles on a large screen at the back of the stage. The highlight of the show came when a third actress, in a long white gown, mimicked her own disrobing actions that were projected on her gown; when she completed this part of the performance, her nude image was superimposed onto her actual presence in the white gown.[153] On the same night's program with Prune Flat was Claes Oldenberg's Moviehouse (the audience stood in the aisles with film projected on them while actors wandered about in the seats) and Rauschenberg's Map Room II (activities of people on a stage with various found objects — tires, a mirror, an old sofa, etc.). Another Happening-type ritual was Piero Helizar's

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[151] Mekas, Village Voice reprints, p. 12, and Renan, American Underground Film, pp. 187-190, and "Talk of the Town," p. 54.

[152] Film Culture, Winter 1966, p. 5, and Renan, ibid., p. 236.

[153] Youngblood, Expanded Cinema, p. 381.

The Last Rites, in which a tiny 8mm image on a huge screen was watched and blessed.[154]

USCO's contribution to the Festival was called Ghost Rev; as usual there was plenty of action from four Carousels, two 8mm projectors, and four speakers of sound. However, the main attention in the piece was put on a film made by Jud Yalkut from a speeding motorcycle. Three copies of the same film were shown as separate images, as similar images moving at different projector speeds, and as related superimposed images -- occasionally of differing sizes as different projection lenses were used. Even the sound accompanying this piece was more complex than usual in that a crude quadradial system was used. Callahan's soundtrack consisted of four monoral tracks fed to four separate speakers with a special switching device to give directional control to the sound.

A taped interview with Gerd Stern and Michael Callahan reveals that performers were added to the USCO piece for the first time since 1963. Carolee Scheeman and two of her dancers painted words on the screen as the words were flashed on the screen in the form of title slides; thus the painted words remained after the word image was gone and provided a further depth to the other projected images. Steve Durkee continued this action for a couple of performances when this USCO show reorganized as Hubbub in December 1965 and January 1966.

The surfacing avant-garde culture in the U. S. that now embraces multimedia presentations, media environments, and New Theatre electronic media works was certainly established in New York by the end of 1965. New Cinema Festival I was a magnificent gathering of the major artists who would shape the aesthetics of the current American cultural transformation. Only Cage and Kaprow were absent from the list of contributors to this stellar festival of creative minds.

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[154] Kostelantz, Theatre of Mixed Means, pp. 83-94 and Mekas, Village Voice reprints, p. 12.

VI. Nine Evenings of Theatre and Engineering

The site for the 1966 E. A. T. (Experiments in Art and Technology) festival was carefully chosen to be the same 69th Street Armory in which the notorious 1913 modern European painting show was held. Critical reaction to the 1966 event was as divided as it had been fifty years earlier, but the show was a success for its creators and E. A. T. continues as a functioning organization today. E. A. T.'s founders were Robert Rauschenberg (who was very involved in theatre pieces by that time) and his Oracle collaborator, Billy Kluver (of the Physical Optics and Electronics Research Department of the Bell Telephone Laboratory, Murray Hill, New Jersey). The Nine Evenings, which were different nights between October 13 and October 23, 1966, marked the first public display of the union between artists and technicians. Some presentations were more successful than others, but all depended on the competence of the engineers for their very existence.

Events presented were the following: Physical Things by Steve Paxton, engineered by Dick Wolff; Solo by Deborah Hay, engineered by Larry Helios; Vehicle by Lucinda Childs, engineered by Peter Hirsch; Carriage Discreteness by Yvonne Rainer, engineered by Per Biorn; Grass Field by Alex Hay, engineered by Herb Schneider; Two Holes of Water-3 by Robert

Whitman, engineered by Robby Robinson; Kisses Sweeter than Wine by Oyvind Fahlstrom, engineered by Harold Hodges; Open Score by Robert Rauschenberg, engineered by Jim McGee; Bandoneon by David Tudor, engineered by Fred Waldron; Variations VII by John Cage, engineered by Cecil Coker.[155]

The first four events listed above were dance pieces, of which only Carriage Discreteness has much relation to this study. In this work, sixteen people wearing wrist walkie-talkies were directed by Ms. Rainer to carry around objects within their enclosure. Actions were slow, stiff, and rarely involved more than two performers at a time. The sound system carried a conversation between a man and a woman while two screens showed films of W. C. Fields and James Cagney. There were also cardboard strips dropped from the ceiling and a man who swung down from the balcony. Since most of the piece was so slow, the audience tended to be quite bored with Carriage Discreteness; during the second performance of this work, a man entered the arena and tossed one of the foam blocks to a performer. As he was led away, he explained that he was only trying to get some life into the event.

The other dance pieces were not so interesting as Carriage Discreteness. Solo also had dancers performing stiff movements while eight other people moved brown platforms by remote control. Vehicle was highlighted by Alex Hay in a transparent box above the floor and various projections on three screens behind the performers. Physical Things involved people with transistor radios walking around in a huge, transparent plastic dome and cylinder apparatus. One reason for the bad reviews this latter work received may have been the fact that thirty people needed 45 minutes to disassemble the work. This was especially bad since Physical Things was the first presentation on the night it was done.

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[155] Doris Hering, "The Engineers Had All the Fun," Dance Magazine, December 1966, pp. 36-40.

The two sound pieces — Bandoneon and Variations VII — are described by other writers as being major occurances in the field of electronic sound production, but they hardly seem involved with multimedia. Similarly, Kisses Sweeter than Wine was a series of anger-motivated actions (pillow fight in a golf cart, huge head of President Johnson carried around) seemingly unrelated to electronic media. This leaves the works of Alex Hay, Whitman, and Rauschenberg as the most relevant to the present study.

Hay's Grass Field began with the artist slowly laying out squares of flesh-colored canvas with numbers stencilled on them. When he completed this action, he sat in the center of the squares and sound devices amplified his body noises over the speaker system. Then, as Hay's enlarged closed-circuit television image watched the area, Steve Paxton and Robert Rauschenberg meticulously picked up each square with slender poles and carried the canvas pieces to one of two piles. After all squares had been retrieved, the three men left the arena. Two Holes of Water-3 by Whitman featured sounds of typing and Vietnam destruction, plus films of travel, penguins, a girl disrobing, girls standing before their reflections on a balcony, and close-ups of hands; there were also remote-controlled, plastic-covered cars. This work received some of the better reviews since its structure was more powerful.

Open Score by Rauschenberg employed electronic media in a manner similar to Grass Field. The piece began with a tennis match between Frank Stella and Mimi Kanarek. An electronic "ping" at each ball/racquet contact was amplified to the audience; then the light dimmed and the tennis game continued as a series of sounds only. The next section of the work involved 300 people who entered the darkened Armory and were introduced on audio tape as their images were broadcast on three large, closed-circuit television screens. Electronic media was used in an ironic way in Open Score because the media were capable of telling the audience something they could not see in front of themselves; the secret was that the television camera operated with infrared light. Rauschenberg presented his work again at the end of the festival, the second time without the taped introductions. It seemed that art and technology had suffered a temporary breakdown because one of the engineers had accidently erased the tape.[156]

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[156] Kirby, Art of Time, pp. 130-131, and Hering, ibid., pp. 36-40.

Chapter Four

Recent Developments: 1967-March 1972

I. Multiscreen Presentations

By the end of 1967 the world was well aware of the concept of multimedia, largely due to a misunderstanding. There were over 100 films of diverse sorts shown at Expo 67,[157] and since many of these were multiscreen presentations in elaborate pavilion settings, the fifty million visitors to the Fair[158] certainly saw much in the way of multiscreen spectacle. In addition, the news media gave more pictorial coverage to the multiscreen wonders of Expo 67 than had been given to previous Fairs, so multiscreen now had a truly international audience. Due to the vague generalities of popular culture, multiscreen easily became "multimedia" and the phenomenon spread far beyond its previous habitations. As far as Expo 67 events are concerned, only the old standby, Laterna Magika, is classified as multimedia by this author. Still, a couple of the multiscreen presentations demand descriptions because of their massive scale.

Without a doubt, the most grandiose multiscreen show at Expo 67 was The National Film Board of Canada's theme pavilion, Labyrinthe. Roman Kroiter directed the project which was designed by Colin Low, coordinated by Hugh O'Conner and constructed by the Montreal architectural firm of

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[157] Judith Shatnoff, "Expo 67 - A Multiple Vision," Film Quarterly, Fall 1967, p. 2.

[158] Frederick P. Pittera, "Fairs and Shows," Britannica Book of the Year 1968 (Chicago, 1968), p. 338.

Bland, Lemoyne, Shine in cooperation with the engineers N. J. Pappas and Associates and R. R. Nicolet and Associates. The building was five stories of poured concrete, hollowed out by the three viewing chambers and partitioned passageways that gave good directional movement, even though a feeling of confusion was created. Kroiter pointed out that the metaphor of the exhibit could be explained thusly: the building structure is the world and a visitor's path through it is his thread of life. Life's experiences are represented by the images viewed in the theatres, and the Minotaur to be encountered in the final chamber is the individual limited nature of each viewer.[159]

Visitors (over a million) often stood in line outside for hours before moving through the three chambers of Labyrinthe. Automated control of the entire production allowed thirty shows a day for six months, with no more than three hours of show time lost during the entire operation. Chamber I was a tear-shaped room with four balconies on either side of a floor screen 38-by-20 feet in area. At the large end of the room, another screen of identical size rose perpendicular to the floor screen. Sound came from five large speakers behind the screens and 288 other speakers spread throughout the balconies. The projectors (one of which had to be suspended from the ceiling, the other laid on its side) were Century JJ-3's, with Hughes 5 KW Xenon lamp housings and Panavision-Steinheil 95mm lenses for showing the 70mm, 20-minute dual film.[160] In this section, the hero (youth) grew strong -- with rock bands, surfing and motorcycles -- but then was confronted with the "monsters" of the world -- freeways, riots, gambling, drunkenness.[161] The screens alternated between contrasting images and panoramic extensions of the same scene. Size and angle of the screens often gave a feeling of enormous depth.

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[159] Labyrinthe, Technical Bulletin Number 8, The National Film Board of Canada, March 1968, pp. 1-6.

[160] Ibid., pp. 7-8.

Chamber II was an M-shaped maze of mirror prisms and thousands of tiny, colored, carefully-programmed lights. Five channels of various sounds also bombarded the chamber, while the sixth channel of the master track carried the light control information. Chamber III was as equally impressive as the first two, with five large screens arranged in a cruciform pattern.

The five screens of 35mm film were shot with a special yoke of five Arriflex cameras mounted and synchronized together with a National Film Board-designed DC interlock. Small film magazines (200 feet) were used for the location shooting, so that the lenses could be placed only 9 1/2 inches apart. Century WMDA 35mm projectors with Hughes 2.5 KW Xenon light and Kollmorgen 2-inch and 2 1/4-inch f 1.9 lenses were used for projection of the 5-screen film. The lenses were also equipped with water-cooling devices to permit 10-second still framing (at which point the film was closely approaching the effects of film and slides used together). The producers admit that the multiple screen format was chosen over a single 70mm print because of economic and technical considerations; so multiscreen in this case was the product of necessity, not invention.[162]

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[161] Shatnoff, "Expo 67," pp. 8-9.

[162] Labyrinthe, Technical Bulletin, pp. 10-12.

Chamber III's 5-screen film showed the meeting and conquest of the "Minotaur" in the form of a crocodile killed by Ethiopian hunters. Further progress of the film contrasted various situations -- old and young, primitive and technological cultures -- and then showed a universal unity of man through his rituals of birth, life and death. Transitions from one scene to the next usually came through just one or two screens introducing the new images while the old scene continued on the other screens. The cruciform was used in most of its possible combinations -- single-screen shots, vertical and horizontal panoramas, 5-screen coverage of one scene, different images on some or all screens.[163] _Labyrinthe_'s display of multiple screens is highly appreciated by this author as an advancement over multiscreen panoramas, but the concept of multimedia was not really brought into this performance. As with the Eames-Nelson lecture of 1953, _Labyrinthe_'s cruciform was a multiscreen equivalent of what was intended to be a single-screen film.

The other superstar from Expo 67 was the Czechoslovakian Diapolyekran exhibit, designed by the old master Josef Svoboda. Literally the name of the exhibit means "transparency multiple screen," which describes quite well this mammoth multiscreen slide show entitled _The Creation of the World_. The total screen area of 22-by-32 feet contained 112 2-foot square cubes, arranged in fourteen vertical and eight horizontal rows. Within each cube were two Carousel S-AV projectors (made by Kodak AG of Germany) mounted one above the other. Special shutters on the projectors allowed instant dissolve from one machine to the other so no cube screen was ever blank for a second except by design. This 15-minute show used between 12,000 and 15,000 slides, with fourteen new images appearing every second on the average. The cubes could even move up to 2 feet out from the wall to increase the depth of the display.

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[163] _Ibid_., p. 10 and Shatnoff, "Expo 67," pp. 9-11.

Control of this exhibit was almost too astounding to believe. All signals originated on a 35mm film frame with 840 opaque and transparent dots on each frame. Light passed through the proper dots and struck two parallel banks of 840 photoresistors. Two banks of these were employed to insure against interference from stray light. Of these 1,680 photoresistors, 1,568 were needed to control the show and the rest operated the control system itself. Light striking a cell decreased its resistance which triggered the proper switch of a possible 1,008. The switch activated the necessary parts of the 240 miles of circuitry which changed slides and moved the cubes. Diapolyekran's master film ran at 25fps and issued up to 19,600 commands per second; the entire 15-minute show (mostly mosaics of several scenes, but occasionally one full-screen image) took 5,300,000 commands to run properly. Kodak's equipment proved amazingly durable for the 183 days of 15-hour day presentations.[164] The effect of this display was simply overwhelming to the audience. Later, stage audiences were treated to the Diapolyekran technique in two of Svoboda's plays, The Suzanna Play (see Appendix II) and The Soldiers, (see section III, this chapter).

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[164] Horst W. Staubach, "Czech this Show!" Modern Photography, August 1968, pp. 38-39.

Following the success of Expo 67, the next major collection of multiscreen events were at Hemisfair in San Antonio, Texas, from April 6th to October 6th, 1968. As was the case with the 1964 and 1967 Fairs, most multiscreen works were remakes of previous developments. Laterna Magika was the only example of the format repeats that qualified as multi-media, but one new exhibit did go beyond the scope of ordinary multiscreen. The Institute of Texan Cultures (the largest structure at Hemisfair, naturally) featured a 20-minute mixed media show that seemed to be a cross between the Brussels Polyekran show and the various 360° environmental presentations that had been cropping up since 1955.

A 45-foot high, 90-foot diameter dome served as the projecion area for this narrative about the multiplicity of Texas cultures, produced by The Office of Gordon Ashby, San Francisco. Rectangular forms of various sizes faceted the entire dome; sixty-five of these surfaces were plastic screens stretched over aluminum tubing, varying in size from 4-by-5 feet to 12-by-16 feet. Six 35mm Simplex projectors, ten 16mm Bell and Howell JAN projectors, thirty Carousels with Xenon light sources and a 4-track Ampex sound system were used to present the show. As is the normal procedure in presentations of such complexity, the entire show was automated and controlled by computer and cues on a channel of the audio tape. Six months of shooting, four months of editing, and one million dollars worth of production and installation costs were required to produce this gem of Hemisfair.[165]

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[165] "The People of Texas," American Cinematographer, August 1968, pp. 596-598, 604.

Whether or not The People of Texas was a multimedia presentation, in the truest sense of the word, is open to debate. Its content could be regarded as a documentary, but at least the Texan Cultures show tried the effects of still and moving imagery in an environmental setting; this was a most welcome relief from the 360° panoramas of previous displays. Dramatic narrative in a multimedia, total environment has been an unrealized dream since the days of Piscator's Total Theatre plans. The People of Texas came close to realizing that dream, but the content was weak from a dramatic standpoint. Surely this facility could someday be used for solid, multimedia, environmental narrative; such a move would be a great advancement in the evolution of multimedia as an art form as well as a method of communication.

Early February of 1969 marked the occasion of the 3-day "Crosstalk" festival in Tokyo. This gathering, described by Stan VanDerBeek as the "first international-multi-media-musical-Japanese-American Festival,"[166] was held in the basketball gym designed for the 1964 Tokyo Olympics. VanDerBeek's entry was Found Forms, in which assistants carried seven 8-by-12-foot screens around the basketball court while he followed them with projectors mounted on swivel bases. Besides VanDerBeek, other American artists who participated were Gordon Mumma, Robert Ashley, Salvatore Martirano, and John Cage — who presented a work for prepared pianos, electronic instruments, and a 10-channel sound system. Cage's score was written on plywood blocks, and the indentations in the wood grain also indicated musical elements. Japanese artists in the festival included Toru Takemitsu, Toshi Ichiyunagi, Joji Yuasa, Toshi Matsumoto, Takahiko Iimura, and Tatsumi Hajikata. Hajikata's contribution was a work for one dancer, eleven old women, ten crows, and a giraffe, done to George Caciappo's "Holy Ghost Vacuum or America Faints."[167]

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[166] Stan VanDerBeek, "Notes from Stan VanDerBeek," Film Culture, Winter and Spring 1970, p. 39.

Also in the spring of 1969, true multimedia emerged at the high-school level at Henry H. Gunn Senior High in Palo Alto, California. This is not to say that all high school "multimedia" before 1969 was merely illustrated lectures, but accounts available to this author indicate that the Palo Alto event was the first reported example of true multimedia in a public high school. The production was coordinated by a faculty member, Richard M. Glendening, and presented three times to an enthusiastic crowd of 1800 students, teachers, and parents at each showing. Man and Power was the theme of the presentation, which was divided into four segments: (1) The Creation (2) Power Conflict (3) Renewed Hope (4) Love and Brotherhood. Music from twenty-three different selections composed the soundtrack; among the cuts were Block's "Senfonca Breve," "Where is Love," from Oliver, theme music from the James Bond film YOU ONLY LIVE TWICE, rock by the Iron Butterfly, folk by Simon and Garfunkle, and an ending segment of the Beatles' "All You Need is Love."

Projection equipment used included two slide projectors, six film projectors, and two overhead projectors to do liquid abstractions. These overhead abstractions were used mostly in the Creation section, along with two films of germinating seeds. Two films of missles and space launches were shown in the Power Conflict section. Other projections used were a 6-minute animation film of thermonuclear effects on life forms (while this film, A TERSE VISION, was shown everything else except the soundtrack stopped), a film of constellations, and 150 slides of various subjects photocopied from books. Films were often shown simultaneously and reversed if more time for projections was needed.

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[167] "Festival Blending Music, Dance, Drama and Film Opens in Tokyo," The New York Times, February 5, 1969, p. 39.

Section three featured a choral reading from Kahil Gibran's The Prophet (augmented by close-up slides of nature), and section four used slides of students plus other slides of women, children, couples, and families represented in famous paintings and sculptures. The performance ended with the Beatles' music and a 10-minute ballet duet — an unusual element to be accepted by a high school audience.[168]

Recent uses of multiscreen have not brought significant advances in the art/communication form. As stated earlier, the most promising hope is for the development of a Polyekran-type narrative drama. The exhibit which is still in operation at the Institute of Texan Cultures in San Antonio, and the Movie Drome developed by Stan VanDerBeek seem to be the best present answers to the question of multimedia's next evolutionary stage. Yet, the former is used like a travelogue and the latter still depends too much on sensory bombardment. Obviously, the next progressive step is not being taken amid public fanfare. However, one group of artists in

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[168] Richard M. Glendening, "Psychedelic Multimedia Happening," Scholastic Teacher, (insert in Senior Scholastic) April 18, 1969, pp. 18-19.

New York City may have already crossed into a 1970's concept of multimedia. This group operater a television environment known as The Global Village.

In September 1969, John Reilly and Rudi Stern started the experimental Global Village in a Manhatten loft. Using the television monitors in a 360° wrap-around configuration, Reilly and Stern showed various multiscreen video advancements. Among other things shown were interviews with Abbie Hoffman and Gerry Rubin, abstractions, a couple making love in a New Jersey meadow, and Martin Luther King juxtaposed with Budwiser Beer ads. In early 1971 the Global Village moved to 91 Second Avenue (near the now-defunct Fillmore East), and set up a circle of twelve monitors, half of them for color. The first production in the new location was The Battle of Algiers, which mixed original film with films of hardhats, students, and police. At last report Global Village remained the only outlet for non-commercial video experiments, and even this one oasis was in financial difficulty.[169] If allowed to survive the rigors of the present economic drought, Global Village should produce some excellent advances in the areas of environmental projection and multiscreen narrative.

II. Environmental Theatre

Hopefully no one with religious leanings will be offended by the inclusion of multimedia worship services in the Environmental Theatre section. The implication is not that worship is a form of theatre (although ritual is considered the antecendent of theatre), but rather that in multimedia worship, a presentation was made for an audience and this presentation sufficiently altered the audience's awareness of its usual worship environment. Slides and film have been used in religious services since the early part of this century,[170] and undocumented multimedia worship services were conducted from the mid-1960's.

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[169] Chloe Aaron, "The Video Underground," Art in America, May-June 1971, p. 75.

One of the earliest examples of multimedia worship to be cited in print was a Friday night Sabboth service held by John Cage in Spring Valley, New York, in 1967. In late July of that year, Rabbi Louis Frishman of Temple Beth El in Spring Valley allowed Cage to present his contemporary service. Rabbi Frishman, in conjunction with Rabbi Robert Schreibman of Temple Beth Sholom (New York City), aided Ken Dewey and the other participants in preserving the essence of the Sabbth service in the radically new form. The entire service lasted 90 minutes, beginning with a brief Reform service followed by film, slides, and taped sounds of the Lower East Side Jewish ghetto in Manhatten. The famous Garment District was shown as it looked in both 1967 and in the early 20th century.

Frances Alenikoff opened the art part of the service by lighting a candle as LaMonte Young played long, somber notes on the organ. Ms. Alenikoff then danced a Sabboth prayer, accompanied by Felix Fibich, while Gershan Kingsley's electronic music played. Cage read the sermon (quotes from McLuhan) as Laura Foreman danced around the pulpit and the doors of the ark. The service was concluded with taped music, flashing lights, and prayers by the rabbis. Questioned afterwards, the congregation had mixed feelings about the affair but the rabbis were quite pleased.[171]

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[170] William L. Roger and Paul Vieth, Visual Aids in the Church (Philadelphia: The Christian Education Press, 1946), entire book.

[171] Richard F. Sheppard, "John Cage Holds a Jewish Happening," The New York Times, July 24, 1967, p. 21.

A distinctly different type of Environmental Theatre was used in 1967 to protest the Vietnam War. In New York City, the "Angry Arts Against the War in Vietnam Week" (January 29-February 5) included three performances of American Atrocities in Vietnam. Second Avenue's Gate Theatre served as the first locale for this underground theatre work, while the later versions were done at the former Courthouse at the corner of Second Avenue and 2nd Street. Electronic media used in the play were Alain Resnai's 1950 film about Nazi concentration camps, NIGHT AND FOG (color and black and white, 30 minutes), slides of soldiers and peasants in Vietnam, slides of anti-war art by Goya, Bosch, etc., and audio tape sound effects.[172] That same year, the New Orleans Group presented Ionesco's Victims of Duty, and the electronic media (film, slides, and audio tape) continued the show after the actors were finished. Some of the audience remained, enthralled by the media presentation, for an hour after the performance was over.[173]

Since many Environmental Theatre artists consider audience participation to be a cherished goal, they should certainly have been impressed with the format (if not the content) of Expo 67's Kinoautomat. Raduz Cincera, another talented Czechoslovakian director, created this film which was structured by audience vote. Five times during the film, ONE MAN AND HIS WORLD, the film was halted — each time at a crucial point in the absurd melodrama — and a live emcee asked the audience to vote on which course the action should follow. Buttons at each seat and a blinking tally board made the process easy and entertaining. With all twists of the plot, thirty-two outcomes could result from the same basic film, so the mood of each audience had a direct bearing on the content of the film. Success at Expo 67 led to an inclusion of this theatrical form at Hemisfair, where enthusiastic crowds again filled the theatre. Cincera remarked about his production:

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[172] Saul Gottlieb, "American Atrocities in Vietnam: a Documentary Environment," The Drama Review, Spring 1968, pp. 163-178.

[173] Richard Schechner, "6 Axioms for Environmental Theatre," The Drama Review, Spring 1968, pp. 41-64.

> What we are doing here really is making a sociological and psychological study about group behavior. . . .We are learning that people decide not on a moral code but on what they like to see.[174]

At least passing mention should be made of the Michael Butler Broadway production of Gerome Ragni and James Rado's "American Tribal Love Rock Musical," Hair. Beginning as an 8-week sell-out show at Joseph Papp's New York Shakespeare Festival in Papp's Public Theatre in 1967, the show achieved enormous international success after its opening on Broadway (April 29, 1968) at the Biltmore Theatre.[175] Hair brought no milestones to New York; Environmental Theatre had been done by Reinhardt in 1924, and even another electronic mixed media rock musical (Your Own Thing — an adaption of Shakespeare's Twelfth Night with six screens of slides, film, and abstract projections) opened on Broadway three months before Hair. The importance of Hair lies in the international publicity and acceptance that this play received, thereby enabling such devices as film projection and environmental performing to reach a larger audience than Reinhardt and the Epic Theatre masters ever achieved. Contemporary mass communications obviously aided Hair in becoming a monumentally successful vehicle; a vehicle which carried many aspects of the New Theatre to a general audience. Compared to most Happenings, Hair still looks more like traditional theatre, but Hair was radical enough for a large portion of its supporters. It took many of its viewers further than they had ever been from ordinary legitimate theatre, thereby making them aware of the possibilities that the underground had accepted for years. The belief that Hair's slide and film projections (which were not even used in some traveling productions) constituted multimedia furthered the mass consciousness of this phenomenon also.

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[174] Perrin, "Projected Images in Education," p. 53.

[175] Hair program notes, (Natoma Productions, Inc., 1969), p.12.

Summer 1968 brought a strange blend of rock discotheque atmosphere and avant-garde music at New York's Electric Circus. Each Monday night for most of that summer, a series of "Electric Ear" concerts was given at the Circus, featuring such serious musicians as Mel Powell, Pauline Oliveros, Michael Sahl, David Behrman, William Russo, Lejaren Hiller, and Morton Subotnik.[176] Two pieces of interest to this report were Shelter 9999 by Alvin Lucier and Takahiko Iimura, and L.'s G. A. by Salvatore Martirano.

Shelter 9999 began with four people in dark glasses making clicking noises like bats, followed by 45 minutes of taped electronic music and three screens of slides and film (much shot from newspapers) by Iimura.

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[176] Donal Henahan, "The Avante-Groove: We're All In It," The New York Times, July 7, 1968, section II, p. 11; Donal Henahan, "Cantata Warms the Electric Ear," The New York Times, August 6, 1968, p. 26; and Donal Henahan, "Computer Tunes Heard at 'Circus,'" The New York Times, August 20, 1968, p. 32.

The final 15 minutes consisted of brilliant white lights flashing off and on; afterward, Lucier and his collegues departed blowing conch shells.[177] Martirano's *L.'s G. A.* (Lincoln's Gettysburg Address) is an event "for gas-masked politico, helium bomb, three 16mm movie projectors, and two-channel tape."[178] In addition to Martirano's electronic music, there were films by Ronald Nameth and poetry by Michael Holliday. This piece was one of the few Electric Ear works with a strong narrative content, rather than an abstract performance nature.

Another worship service to be considered in this section occurred during October 1968 in the University of Michigan (Ann Arbor) Episcopal Canterbury House. Chaplin David Burke presented a multimedia Sunday service as the culmination of a seminar on contemporary worship. This student center was used during the week as a coffeehouse, so the surroundings were already familiar and comfortable to the participants. Music was provided by a folk trio, who used both acoustic and amplified instruments. Additional sound came from tapes of the Beatles' "Flying" and "The Fool on the Hill" (a song frequently interpreted as referring to Jesus). Fosters, theatrics by the visiting San Francisco mime troupe, and 8mm film by Craig Hammond all combined to give the participants a meaningful ritual celebration.[179]

Surely the most magnificent example of Environmental Theatre ever produced was John Cage's 1969 *HPSCHD*. Presented on Friday, May 16 of that year in the University of Illinois' 16,000-seat Assembly Hall, the 5-hour event was a marathon of sight and sound. HPSCHD is the computer abbreviation for harpsichord, an instrument that enjoyed maximum use that night. Seven of these amplified harpsichords produced excerpts from Mozart that would have astounded the composer. Three of the musicians played fixed versions of Mozart's 18th-century "Introduction to the Composition of Waltzes by Means of Dice," (a chance composition obviously admired by Cage). They were each allowed to play the sections of their solos in any order they chose. Neely Bruce and Yuri Takahashi played fixed collages of music from Mozart to the present, and David Tudor offered "computer print-outs for 12-tone gamut." Phillip Corner was allowed to play any Mozart he wished; in addition, all of the musicians were free to play any part of any other musicians' solo.

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[177] Theodore Strongin, "Noisy Crew Brings 100th-Century Life to Electric Circus," *The New York Times*, August 13, 1968, p. 44.

[178] Youngblood, *Expanded Cinema*, p. 378.

[179] Myron B. Clay, Jr., *Multimedia Worship* (New York: The Seabury Press, 1969), pp. 6-7, 37.

As if the sounds from these seven instruments would not be enough to fill the huge auditorium, Cage added taped electronic music -- composed by himself and Lejaren Hiller -- on fifty-two separate sound systems encircling the rear seats of the Hall. Each speaker had its own tape deck and amplifier, so the volume could be altered continuously on all fifty-two compositions. Since the electornic pieces involved octaves of five to fifty-six tones, the variety from the loudspeakers was endless and chaotic.

Sound was prolific at this performance, but by no means dominant. Literally thousands of visuals bathed the place in light and form. Each of the forty-eight large windows in the building was covered with translucent plastic so that projections could be shown on them and seen from both inside and outside. Around the exterior of the building were fifty-two slide projectors to keep the windows filled with images. Eleven 40-by-100-foot plastic screens ringed the center of the performance space; over these central screens hung an enclosing screen 125 feet high and 340 feet around. Ronald Nameth programmed 100 films and 8,000 slides concerning the concept of man's ever-increasing awareness of his position in the universe — from cave paintings to space walks. The immensity of this presentation had a universal impact about its very nature, a nature that fit Cage's ideal system of anarchy. Cage is a believer in the cooperation of many to produce a whole, rather than the wielding of power by one to direct all elements. HPSCHD certainly exemplified the mind of its creator.[180]

III. Electronic Media and Performers

Many psychedelic celebrations were held in New York City (and surely other places as well) in late 1966 and during 1967. These festivities used film, slides, dancers, and amplified music to achieve states of mind-expansion (usually the festivities were aided by drugs, but the media were quite stimulating in themselves). Some of these techniques found their way onto the legitimate stage in 1967. Astarte, presented by the Joffrey Ballet in the New York City Center, was an interpretation of the love-goddess myth in terms of a psychedelic experience, utilizing electronic media. Trinette Singleton and Maximiliane Zamosa coordinated the dance, the Crome Syrcus provided rock music, Gardner Compton made films, Thomas Skelton constructed kinetic scenery, and Midge Mackinzie supervised the entire project.[181] Also in 1967 the Boston Opera Company utilized the psychedelic slide patterns of Jackie Cassen and Rudi Stern in a presentation of Stravinsky's The Rake's Progress.[182]

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[180] Youngblood, Expanded Cinema, pp. 374-378; and Richard Kostelantz, "They All Came to Cage's 'Circus,'" The New York Times, May 25, 1969, section II, p. 23.

By May of 1969 the psychedelic experience reached the stage of the Seattle Opera House in a 40-minute work called Mantra, conducted by Henry Holt. Title III of the Puget Sound Arts and Sciences Program sponsored this modern operatic work, which featured six dancers, three opera singers, four light artists, an amplified rock trio, a jazz trio, a 25-piece orchestra, and three 200-pound fiberglass circles. Mantra was composed by Peter Phillips and choreographed by Mary Staton. The Retina Circus provided the dazzling light show, while the fiberglass sculptures were conceived by Doris Totten. Generally the reaction of the Seattle audience to this work was positive, especially among the younger viewers.[183]

In the last twenty-five years, Josef Svoboda has designed nearly 400 stage productions — many of them done as part of his job as Chief Designer and Technical Director of the National Theatre in Prague. His designs for these plays include some of the most innovative work in the history of the theatre. With these facts in mind, it should come as no wonder to the reader that Svoboda appears on these pages as often as Cage. Another Svoboda play, The Soldiers, done in Munich in March of 1969, will now be elaborated.

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[181] Masters and Houston, Psychedelic Art, p. 146.

[182] Ibid., p. 34.

[183] Raymond Erickson, "Seattle Goes Psychedelic," The New York Times, May 18, 1969, section II, p. 19.

The Soldiers, a modern German opera by Zimmerman, incorporated the wall of projection boxes known as Diapolyekran. For this play, the scale of Diapolyekran was reduced from the level of Expo 67 (thirteen screens were used instead of 112), but the size of each projection box increased from 2-feet square (the Expo dimensions) to different sizes up to 12-by-18 feet. These screens slightly overlapped, and two large boxes for actors were incorporated into the screen cluster. Front projection screens could be pulled across the front of the acting boxes, thus adding two more projection surfaces to the thirteen rear-projection screens. All surfaces used only black and white slides, but color film was used on three of the screens.[184] Svoboda said the visuals presented "a collage of military life from Rome to the Franco-Prussian War in confrontation with World War II and Vietnam."[185] Such effects as the Goya etchings on the horrors of war juxtaposed with contemporary war tragedies were brought to a climax as the screens moved off the stage to reveal a huge, flashing, screeching "war machine" moving through the darkness toward the audience.

One final work to be discussed in this secion was a recent production of the world's first rock opera, Tommy. Peter Townsend of The Who — an English superstar rock group — aided by the other members of his talented quartet, wrote Tommy in early 1969. Throughout the rest of that year and into 1970, The Who performed their creation in England and the United States. Generally the story line (a strange Messiah tale of a deaf, dumb, and blind boy who became a pinball champion) was carried by projections and a minimum of acting. Later productions of the work were done that did use actors in addition to the musicians; one of the most exciting versions of the opera was done by the Drama Department of Memphis State University.

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[184] Burian, Sceneography of Svoboda, pp. 95-96.

[185] Burian, "Josef Svoboda," p. 142.

Tommy ran from October 31st to November 13th, 1971, at Memphis State, with enthusiastic audiences for the entire two weeks. Keith Kennedy, who directed Memphis State's successful version of Hair, was in charge of Tommy as well. His stage was a giant tarot card which extended out into the audience; a large box at the rear of the card-platform served either as a backdrop or as another platform for actors. Behind the box was an equally large screen which was used as a front-projection surface for films, and a rear projection surface for slides. Performers could also do shadow play behind the screen when it was backlighted. A rock band performed the score, while neon sculptures of word and symbol fragments flashed all around the auditorium. When this show was originally done by The Who, the emphasis was on the rock-concert quality of the music; at Memphis State the visual elements (including the performers) balanced the dramatic force of the music. The opera ended with the failure of the hero's Movement, and seemed to pose a final question of "what's next?"[186]

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[186] Personal conversation on November 21, 1971, with Gil Bleau, who was a consultant for the Memphis State Hair tribe and who personally observed the version of Tommy described above.

IV. Environments

Following the striking example set by the USCO electronic media Environments, other artists made eye-catching electronic displays in the late 1960's. One of the better specimens of this form of multimedia was Otto Piene's 1967 work, The Proliferation of the Sun. Building on his experience as one of Europe's most accomplished Happeners, Piene added spectacular use of electronic media to a Happening format to produce Proliferation. The piece was done in New York first (twenty performances in Aldo Tambellini's multimedia theatre, The Black Gate), and was then presented at the Kunsthalle in Nuremberg. Accounts of this show are sketchy, but it used about a dozen projectionists, 8,000 slides, microphones, audio tape sound, balloons, and compressed air in a 35-minute performance situation. Through all of this, the spectators laid on the floor, absorbing the bombardment.[187]

Stan VanDerBeek had been involved in environmental projection for some of his entries at the New Cinema Festival I in 1965, but in 1968 he surpassed the scope of his previous auditorium environments. While serving as a film artist in residence at Colgate University (Hamilton, New York) in March of 1968, VanDerBeek commandeered the entire art building for a massive multimedia work called Feedback. All the windows in the building were covered so that the entire structure was darkened for projections. The day-long Environment utilized every light projection machine that VanDerBeek could secure.[188]

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[187] Henning Rischbieter, Art and the Stage in the 20th Century (Greenwich, Conneticut: New York Graphic Society Ltd., 1968), p. 248.

[188] VanDerBeek, "Notes," p. 40.

An event which helped further public consciousness of multimedia (intermedia) was the Intermedia '68 festival. This collection of environments, sculptures, and activities was cosponsored by the New York State Council on the Arts and the National Council on the Arts. During the spring of 1968 it toured college campuses in the Northeast and Midwest. John Blockman Associates produced the eleven events which were displayed first at the State University of New York at Stony Brook, beginning on February 15th.

When the show came into New York City, it was held at the Brooklyn Academy of Music in March 1968. Among the events were Dick Higgins' Dance Music #2, in which the participants waved incense sticks; Tambellini's Black Zero; a song, dance, and piano act — Word, Dance, Music — by Al Carmines, Renny Carlip, and Aileen Passloff; Carolee Schneeman's Illinois Central Transposed, a theatre piece with slides, dances and audience participation; Elm City Garage Works, a Happening by Ken Dewey; a dance presentation by Trisha Brown Schlichter; an electronic audio concert by Terry Riley; Allan Kaprow's Round Trip, where people rolled a large paper ball from each end of a tunnel to meet in the middle (another Kaprow contribution was Overtime, in which 200 feet of fence was moved 1 mile through a woods); and Les Levine's Photon: Strangeness 4, an Environment of wires and television cameras with two wires which gave off 1,000 volts of electricity when touched together — just enough for a mild shock that could be passed among the participants.[189] By now the reader has surely noted that this festival's name had little to do with the substance of the events. However, one display that did qualify as true multimedia (or intermedia) was the Ten-Foot Fanflashtic by USCO.

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[189] Grace Glueck, "Brooklyn Is Host to 'Intermedia '68,'" The New York Times, March 9, 1968, p. 22; and Elenore Lester, "Tune In, Turn On — Walk Out?" The New York Times Magazine, May 12, 1968, p. 30; and Howard Junker, "Mixed Bag," Newsweek, March 18, 1968, p. 112.

Jonathan Ayers, USCO's aerodynamics expert, had to use three months of experimentation and $6,000 worth of test and final equipment to bring the project to completion. The original concept called for a large cylinder full of Dow Chemical Plastic-Pak (a packing material somewhat akin to plastic elbow macaroni) and fans to blow the material around in the cylinder. As the idea grew, a support apparatus with an aluminum floor was added around the cylinder to hold forty participants. Many black, white and color balloons were used so that the entire project would hover above the ground while four strobe lights flashed with twenty flashes per second in various combinations to provide fifty-five possible silhoutte patterns. A 20-minute sound tape of rock and classical music plus babies crying and other sounds looped continuously as people rode the Fanflashtic (electric fan, flash of storbe lights, tick off and on of lights). Since people only stayed about 15 minutes at the exhibit, most never realized that the sound was a loop. Audience response to the work was quite good, especially from the young.[190]

Certainly the most extravagent multimedia Environment to be constructed in recent years was the Venezuelan exhibit "Imagen de Caracas," presented in that country's capital city in 1970. Two years of construction were required to make this massive addition to the city's special display site — Despositivo Cuidad (Mechanical City) — celebrating the 400th birthday of the city.

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[190] Lester, "Tune In," pp. 30, 68-69.

"Imagen de Caracas" was a full-acre building supported by sixteen 78-foot steel columns, four of which formed a center space of 9,620 square feet containing a stage. Eight 35mm film projectors were paired on the four columns and projected film in all directions, but not as an attempt at coordinated 360° cinema. Slides were projected from forty-eight projectors suspended from the ceiling of the building. Each projector carried a separate message content in its slides so that no formal narrative was made from all these images. Instead there was a complete Environment of information for each viewer to process individually. Cross-reference symbols were included among the different projections, though.

Eight box-like screens, 33 feet high and 65 feet wide, were spread throughout the building. These screens of tubular metal framing and reflective aluminum viewing surfaces were either portable or attached to the floor or ceiling. Other projection surfaces included forty-one geometric forms (cubes and rectangles, some with sides as large as 324 square feet) hung from the ceiling. Sound came from forty-six loudspeakers spread around the ceiling, plus several 8mm projectors which showed sound films. Many other lights, slides, and photo displays added additional information; live actors were even employed to emphasize certain film sequences. The audience was guided around the maze of activity by reflectors on the central columns and ascending wooden platforms that allowed people to see more of what was happening.[191]

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[191] Inocente Palacios, "Imagen de Caracas, " The Drama Review, Winter 1970, pp. 130-132.

A statement by the participating artists described much of the content of the huge display on Caracas' violent history with a quote from Antonin Artaud.

> Great social events, conflicts between races or between societies, natural forces, intervention of fate, magnetism of hazard were manifest there, whether directly through the agitation and gesture of characters whose stature was of gods, heroes, monsters of mythic dimensions, or directly, through material manifestations.[192]

In April of 1971 the city of Nuremberg also had a major celebration: the German fest was in honor of the 500th anniversary of Albrecht Durer's birth. Included among the many special displays made for that celebration was Josef Svoboda's Noricama — a 10-minute, 10-screen show about Nuremberg's history. His presentation was made in the great hall of Nuremberg Castle in conjunction with a display of graphics concerning the same subject. Svoboda's show featured five rectangular panels that together comprised a screen 13 feet high and 36 feet long. Any or all of these panels could move up to 12 yards forward, retaining their images. In front of the vertical five screens were four horizontal screens that could flip up to receive an image. Each panel in the display could show a separate image or part of one large image. Four-channel sound accompanied the presentation.[193]

February 1972 brought an Environment substantially different from the ones previously described. In Los Angeles, a group of twenty-six women artists transformed an old mansion into Womanhouse — a 17-room expression of the women's exasperation with their wife/mother/homemaker roles in a male-dominated society.

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[192] Ibid., p. 133.

[193] Jarka Burian, "The Scenic World of Joseph Svoboda," Saturday Review, August 28, 1971, p. 35 and Burian, Scenography of Svoboda, p. 197.

This exhibit was put together by the participants in the feminist art program at the California Institute of the Arts, the only program of its sort in the nation. About 4,000 visitors saw many striking displays that drove home the problems of female stereotyped roles. The sheet closet contained a mannequin embedded in the shelves, the kitchen was covered with sponge "fried eggs" — (many of which resembled female breasts), and the staircase was topped with the front half of a dummy bride while the back half of the dummy was sunk into the wall at the bottom of the stairs. Hopefully the message of the Environment got across to the visitors, because the house has now been demolished to make room for apartments.[194]

V. Multimedia in Austin, Texas

Most of the events described up to this point have taken place in the traditional entertainment capitols, especially New York. This does not mean that these cities are inherently endowed with better artists, but it does indicate that events which occur in news media centers are more likely to be reported in national publications than events which occur away from these centers. Even the national news weeklies are New York-oriented, and seem to cover only political events on a broad scale. These coverage limitations present quite a problem to a researcher of a contemporary subject, such as multimedia. In an attempt to partially alleviate the problem, this author would like to present a report on the state of multimedia in Austin,

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[194] "Bad-Dream House," Time, March 20, 1972, p. 77.

Texas. All material in this section was gathered by personal observation and interview, since no published accounts exist.

Austin is what would be considered a small city, with about 300,000 population and no heavy industry. The main flow of commerce into the city is in relation to the state capitol and the main campus of the University of Texas (40,000 students), both of which have long been located in Austin. Currently there are two commercial media production companies in Austin (in addition to television and radio stations), both of which include "multimedia" in their offerings. Neither of the two producers — Richard Kidd and Fred Miller — is based in Austin because of the volume of local business; there are probably no more than a dozen demands for commercial mixed media presentations per year locally. Curiously enough, both men decided to work from Austin because they enjoy the location as a place to live. Telephone and airline connections enable them to reside in Austin while producing films, slide shows, and other types of media presentations for clients all over the country. This represents a changing trend in electronic media production, a trend that began in the 1950's with films shot entirely on location rather than in a Hollywood studio. Modern air travel and telephone communication has allowed producers to move away from New York and California without losing their competitive status. Austin is only one of many homes of nationally-oriented producers.

The University of Texas at Austin offers one of the few graduate programs in multimedia (within the Radio/Television/Film Department) in the country, and one of the first to graduate with a concentration in this field is the author of this study. As part of the course work involved in preparing for this degree, the author conducted an experiment, in March and April of 1971, concerning the effectiveness of multimedia worship services. The experiment was undertaken to fill one of this researcher's many gaps in his knowledge of religious multimedia — a subject with a very tiny bibliography. To conduct the experiment, a 2-screen slide, film and audio tape presentation based on the rock opera, Jesus Christ Superstar, was made by this author and shown to a number of typical worship communities around the University of Texas. Several religious student centers serve this campus, but none of them make regular use of electronic media in the worship services. Some of these centers had used some form of electronic mixed media shortly before 1971; these communities — Baptists, Lutherans, Methodists, and Catholics (plus a University religion class and a graduate Communications seminar) — were the ones tested since they would not be affected by the novelty of multimedia worship. Non-Christian religious groups were not tested, since they could not be expected to have the proper background knowledge to evaluate the content of the show.

The original hypothesis of the study was that the media presentation — an unorthodox look at Jesus and the Easter story — would be more readily received by people who had shown themselves to be theologically unorthodox by means of a pretest. Inconclusive results of the study showed some verification of the hypothesis, but every group tested showed vigorous enthusiasm for the presentation, no matter what the theological stand of the group. Even the most confirmed fundamentalists received the show well, indicating an entertainment factor which was judged separate from the content of the show. As a matter of fact, the theology sections of the post-test showed confirmation of pretest scores, but absolutely no correlation with the scores that rated enjoyment of the show. All this says that an entertaining show will be accepted even if its content is not; the value of that information is open to question. To some it would indicate that multimedia shows are good for the services, since they are appreciated by the congregation. Others would say that the entertainment value of a show does not justify its expense, if no reaction to the content can be utilized in the service. Whatever the results indicate, they are far from definitive because a procedural error eliminated all but nineteen of the roughly 300 subjects at the Catholic Student Center. This left a survey of 109 subjects out of a potential 400, so the researcher was reluctant to draw any definite conclusions. The one result that did seem evident, though, was that the electronic media presentation was very welcome in the services in which it was incorporated.

Another facet of Austin multimedia that is unique for the national picture is the Experiment Theatre, the only one of its type in the nation. Multimedia theatre on a permanent, commerical basis originated in San Francisco in 1970 with the San Francisco Experience Theatre on Ghiradelli Square. This alternative to single-film theatres shows a half-hour sound, film, and slide travelogue of San Francisco for twelve hours daily. Another similar theatre (owned by the same corporation) operates in Honolulu with a Hawaiian travelogue, and still another theatre of the same type is planned for New York City. While these facilities served as the model for the Experiment Theatre (a part of the Experiment store, a subdivision of the John Roberts Corporation), they did not provide a model for the content. The basis of operation for Experiment Theatre is dramatic narrative multimedia, a contemporary alternative to the conventional film. Equipment available for the experiments in this 150-seat theatre includes four Kodak Pageant 16mm projectors, twenty Kodak Ektagraphic slide projectors complete with ten modified dissolve units, and Sony quadradial sound. All this gear is directed by a 24-channel computer/sequencer built especially for Experiment Theatre.

Richard Kidd Productions prepared the first multimedia presentation for Experiment. This initial show was a 1-hour slide/film/sound piece called Keep Truckin'; basically the story line concerned the life and problems of a Texas truck driver. Neither the production crew nor the theatre management was entirely pleased with the finished product, with technique problems and a weak story line being the most frequent criticisms cited. Audience response and attendence were, likewise, much weaker than expected. At the time of this writing, continuation of the theatre depends on audience approval of the second presentation which opens on April 14th. Beyond, the second Experiment show, is a space-flight visual extravaganza with much actual outer space footage supplied by N.A.S.A. A good response could possibly revive plans for other Experiment Theatres at ten other large university campuses around the country. Failure of the early shows at Experiment would surely nullify the hope for more theatres, since the project was an economic gamble from the start. The future is impossible to tell at this juncture. Some day soon multimedia theatres may be open nationwide, encouraging extensive development of the new communication art; then again, multimedia theatres may be shelved as was Cinerama in 1939 to await some distant revival.*

While this report was in its final printing stages, another mixed media event occurred in Austin, one that could be a first step toward a significant development. Dr. Richard Byrne, professor of Radio/Television/Film at the University of Texas, directed a graduate production class in making a 7-screen, 360° presentation called Threshold. This 12-minute show was an attempt at the same principle (dramatic narrative multimedia) as is being explored at the Experiment Theatre, but Threshold went one step further by putting the dramatic narrative in an environmental projection situation. The show ran from April 4-8 at the annual, University-wide display festival, Showcase.

Threshold is loosely based on Joseph Campbell's Hero With a Thousand Faces, with just a touch of ideas from Issac Asimov. The hero (Media Child) enters a junk shop where he views an old TV that sends him into confrontation with the archetypal gods of Hedonism, Academia, Science, Politics, and Religion. All these encounters -- which rock the audience with fast-moving slides and collages of sounds -- finally leave the hero with a mysterious "boon" which signifies his new-found confidence, knowledge, and achievement. While all members of the participating class deserve credit for the slide/tape presentation, major honors go to Jim Sturdivant, Guy Deuel, and Mike Hayde for the script; to Dr. Byrne for the photography and to Lance Covington for the aerial planing. The quadrasonic sound was recorded and mixed by Bob Culbertson and David Ham. Coke Dileworth, Austin architect, designed the theatre and the projection system (a through-the-slit process, similar to Circarama).

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*Unfortunately for the development of multimedia theatres, Experiment has already proved to be a loser as this report goes to print. Beyond lasted only one week and was replaced by reruns of old films. From this author's standpoint, the Kidd productions were more to blame for the failure than the general concept of a multimedia theatre.

It is impossible for this author to give an objective evaluation of Threshold, since he is so personally connected to the creators. Any extreme of praise or damnation would have to be seen in the light of personal association with the show; suffice it to say that the presentation came close to living up to its intentions. The narrative line was obvious, even though specific characters and sequences were more understandable from the program notes than from the actual viewing. Some criticism of image barrage would have to be tolerated, but the story was clear enough to take this show out of the realm of mere sensory stimulation. There was a narrative to be grasped, and it did come across in an entertaining, clever manner. Possibly the most serious objection this author would make concerning Threshold is that the story had much potential for subtle elaboration which was lost by the brief over-simplified format. Only the bad aspects of each god were shown, giving the impression of a rather typical youth-rebellion attitude. Conceivably, this author has not made the connections of these typical protests to the concept of archetypes, but the criticism stands anyway.

Chapter Five

Concluding Observations

Many historical surveys end with a summation of the major events and an optomistic prediction for the future of the subject. Since both of these elements were included in the Introduction of this work, it seems useless to restate them. A more worthwhile ending would have to account for the distain that many people currently hold for multimedia. The author cannot help but feel a certain sense of protection for his pet subject as he becomes aware of frequent criticisms for mixed media productions. Objections have been voiced in the business world:

> Multi-media has become a buzz-phrase; a term often given to a bunch of unrelated slides on three screens with noisy music and some philosophical statement from the people who put it all together.[195]

Other complaints have come from educators, this one from John Silber, former dean of the College of Arts and Sciences at the University of Texas at Austin and presently president of Boston College:

> McLuhanism is an intellectual miasma, many educators have embraced it, plunging headlong into meaninglessness with light shows and multi-media extravaganzas on almost any subject.
>
> The formula is simple: turn on three speakers, light up three screens, set a couple of strobe lights flashing; then, only then, begin lecturing in the midst of confusion and divisionary activity.
>
> In sharp contrast to orchestration, the multimedia faddists throw raw unordered data out at students. This unhappy consequence of instant culture,

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[195] Leslie Buckland, "Communication Not Chaos in Multimedia," Audio-Visual Communication, November-December 1971, p. 9.

> this pursuit of simultaneous chaos is only an extreme for reductionism.[196]

Film critics have whittled away at electronic mixed media almost from its first inception. Avant-garde journalists have been quick to point out that most multiscreen displays at the World's Fairs have been devoid of significant content; in the same vein, critics from the popular culture journals have lashed out at non-narrative multimedia works (especially the products of VanDerBeek and USCO) for being confusing barrages of unrelated information.

All of this conflict and criticism is worrisome to this author, because he sees much similarity between the novelty appeal of multimedia and the appeals of such defunct novelties as Cinerama, 3-D films, Smellovision, etc. The demise of these latter attempts at cinema expansion was due largely to lack of sufficient development: (1) producers of these novelty films were playing on stimulation factors that had no intrinsic relation to the content of their films, (2) viewers who were looking for either a good story or good cinematic art were disappointed with the superficiality of Cinerama, et al. Multimedia now seems to be drifting toward the same dangerous path. Information-overload presentations can be philosophically justified as being counterparts of real life situations, but this is hardly reason to continue offering these information explosions to people who want comprehendable narrative content. Multimedia must become more understandable if it is to survive as an effective means of communication. The main problem to be overcome is the lack of knowledge about constructing a workable multimedia show.

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[196] Mike Fresques, "Silber Asks 'Civilian G.I. Bill,'" The Daily Texan, February 12, 1972, p. 1.

Too many people are mixing uncoordinated visuals and sounds for this criticism to be denied. Very often these misguided creators have never had any experience or training in using multiple elements for communication of an idea. Familiarity with single-image films or traditional lecture situations can be helpful in understanding multimedia, but training in these fields is not always enough to help cope with the complexity of multiple presentations. Specific training in multimedia can be valuable, but only if the instruction itself gives the student as much concrete information as is known about the subject. A multimedia course that simply allows students to mix sounds and sights and then evaluate each other's work is not enough to constitute proper training in multimedia. Such trial and error methods usually serve only to separate the students with inherent talent from those who are not so gifted. The instructors have failed all these people if no serious attempt was made to examine the whys and hows of the subject of multimedia. Possibly no beginning multimedia class should ever get to the stage of production without the class understanding why a multiple approach would ever be employed rather than a conventional single medium approach.

Training in such a subject as multimedia should be very intensive. Not only does a student have to be qualified as an operator of various types of equipment, he must also know how to compose his visuals and sounds so that his output is not confusing. This requires knowledge of composition that could easily occupy a semester's worth of design. Other necessary skills are the abilities to communicate an intended message, emphasize without overstating, persuade with tact, and understate when necessary.

With all of this knowledge at hand, a student should be reasonably prepared for successful production, but — an instructor would surely ask — how can all these skills be taught effectively in one semester? The obvious answer is that they cannot be taught properly in such a short period of time without some previous foundations in all of these required areas. Multimedia should be taught as an upper-division course with prerequisites in communication theory and production (and basic design if this is feasible). Also, textbooks of some sort need to be written immediately so that each class will not have to reinvent Cineorama or Polyvision. For knowledge on so vast a subject to be passed on to students only by word of mouth is incredible. This situation must be remedied.

A student of multimedia literally has to be a student of each medium he employs, since any element used without knowledge of its qualities and effects will probably distract from the coordination of the other media. Included in the areas that a multimedia expert should master are sensory experiences -- heat, cold, motion, darkness, glare, silence, loud noise, stimulating pleasure, pain. The eyes and ears of the observer are the senses usually exploited, but proper stimulation of the other senses could be enormously effective. Mastery of such diverse skills would surely lead a student up to the post-doctoral level, but a person with such intense training would then be qualified to pass on substantial knowledge to upper-division undergraduates. Knowledge and professional training are the key words for the future of multimedia; if this field cannot adopt the rigorous disciplines of other serious areas of endeavor, then multimedia is destined to pass the way of previous undeveloped novelties.

Appendix I

multimedia. adj.: using, involving, or encompassing several media.[197]

Since approximately 1961, the word multimedia has become a bona fide part of the English language, enjoying particularly frequent exploitation in the U.S.A. The word is used to identify events that range from serious theatrical experimentation to frivolous displays of multiple screens. Probably the most common "multimedia presentation" consists of one, two, or three screens of slides with music or voice on audio tape. Even though there is no established body of authoritative literature on which to base any final evaluation of the term, it would seem that a brief look at the usage of the word "multimedia" would be illuminating to a student of the subject.

In 1961 the word Multimedia was included in the title of the Multimedia Instructional Laboratory, designed by the TelePrompTer Corporation for the University of Wisconsin. This college facility was, presumably, the first of its type (although similar operations had previously been installed by TelePrompTer at military bases). Throughout the 1960's more multiscreen/sound laboratories were built in U.S. colleges and public schools; concurrent with this expansion of facilities, the term "multimedia" was used with increasing frequency in education magazines. As a result of all this activity, the concept of "multimedia" enjoyed general acceptance at all levels of education by the late 1960's. Unfortunately, the word often seems to have been applied very indiscriminately to virtually any use of audio-visual aids.

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[197] Webster's Seventh New Collegiate Dictionary, (1969), p. 556.

Judging by the magazine terminology from various fields of American life, "multimedia" must have entered popular language from the education magazines. None of the business, religious, or popular culture periodicals which now make liberal use of "multimedia" used the term before its inclusion in Audio Visual Instruction in 1961 (in the Hubbard article describing the Wisconsin installation).

The New York Times Index provides a good indication of the growth of multimedia. In 1966 there was one article concerning a mixed media event; this was listed under the heading of "Happenings." By the next year, there were three "multimedia" articles under "Happenings" and one under "Communication." 1968 was the great breakthrough since "Multimedia" gained its own category — with almost twenty entries! The following year was a repeat success, but the last two years have shown a sharp decline in the number of "Multimedia" articles, with only about ten each year. Another major index, The Reader's Guide to Periodic Literature, had enough "multimedia" articles to warrant a heading for the subject in Volume 29 (March 1969-February 1970). However, "intermedia" made the Reader's Guide in Volume 28 (March 1968-February 1969).

"Intermedia" had been used by the Underground since the mid-1960's to describe various New Theatre and Expanded Cinema events. The origins of "intermedia" are rather obscure,[198] but the term was apparently used by avant-garde artists as a reaction against the commercially popular "multimedia." Definitions of intermedia include the following:

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[198] Dick Higgins claims to be the first to apply the word "intermedia" to events previously known as Happenings. Film Culture, Winter 1966, p. 8.

> Intermedia refers to the simultaneous use of various media to create a total environmental experience for the audience.[199]
>
> . . .a cross-fertilization of all the traditional arts — music, dance, theater, painting, sculpture, poetry, — with film and other technological by-products. . . .Its goal is to involve audiences or participants in an experience on a direct, even visceral level.[200]
>
> 'intermedia' — art that exists between prevalent definitions or makes use of materials and concepts from two different disciplines.[201]

The above definitions show an uniformity in concept concerning intermedia; yet there seems little reason based on content of events to equate the "multimedia" of education and popular culture with the "intermedia" of the avant-garde. Nevertheless, many authors use either term to describe events of both types. Should the terms be considered non-interchangeable? Also, how should the various synonyms of intermedia — terms such as crossmedia, Expanded Theatre, Expanded Cinema, and Total Theatre — be treated regarding "multimedia?" The answer depends on the attitude of each contributor to the field. Some are willing to accept any term in order to prevent tensions and facilitate communication; others, particularly individualistic artists, will cling to a pet phrase and totally disassociate their work from the general field of intermedia or multimedia.

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[199] Intermedia Systems Corporation (Gerd Stern and other members of USCO) in Youngblood, Expanded Cinema, p. 348.

[200] Lester, "Intermedia," p. 30.

[201] Dick Higgins, paraphrased by Michael Kirby, in The Art of Time, p.13.

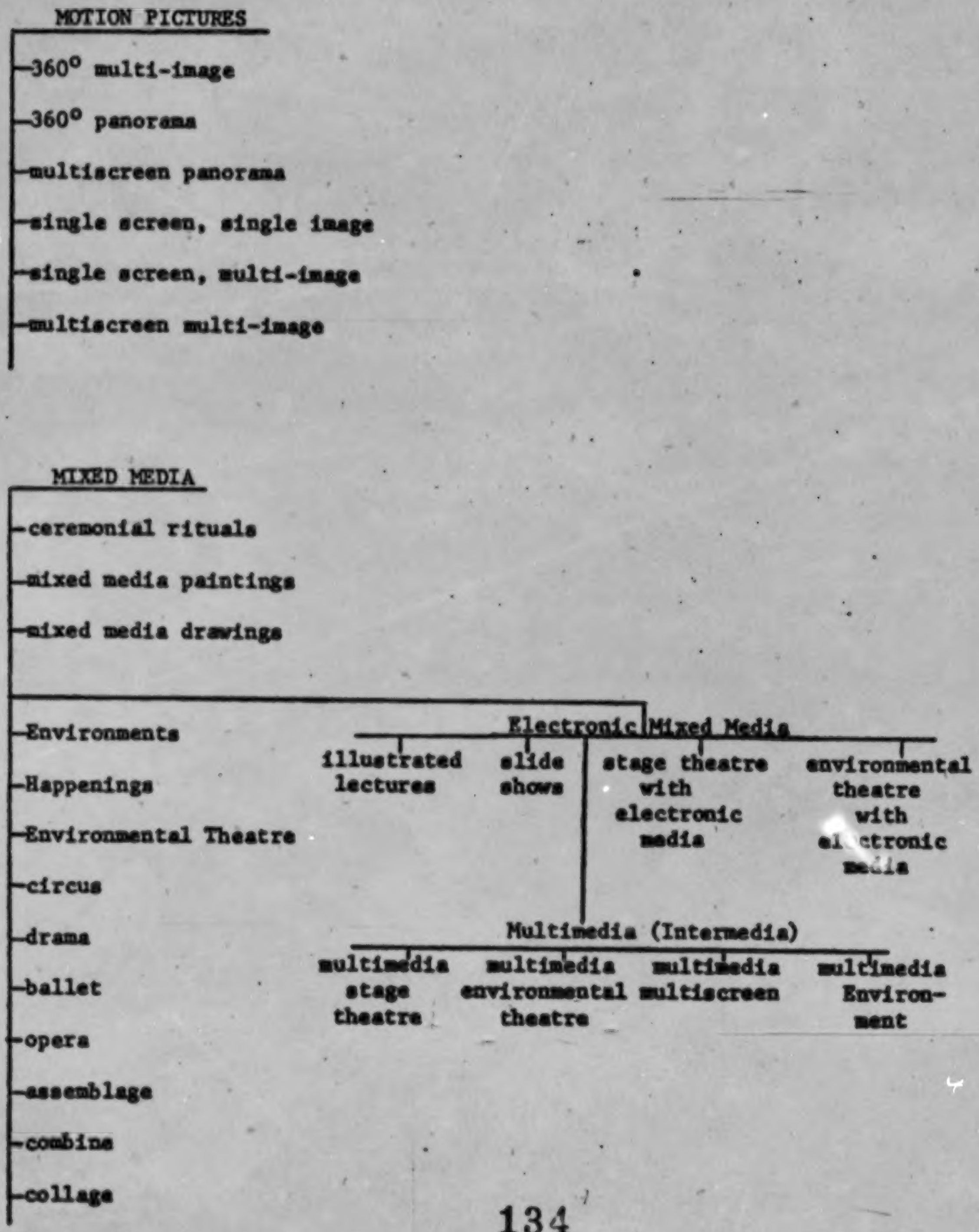
As stated before, there are no real authorities to turn to for definitions or clarification. Semantic cooperation among participants is the only hope for coherency. There is obviously a distinct conceptual difference between the multiscreen works of the education and popular culture worlds and the intermedia theatre pieces which employ projections and sound in some performance context. Further, it does not appear that either "multimedia" or "intermedia" currently is used as a broad enough term to cover both sides of the topic.

Rather than add to the confusion by coining some new version of Gesamtkunstwerk, this author calls for a return to the older term, mixed media, as the super-category word. All that is needed is the addition of the prefix "electronic" to indicate mixed media works that ultilize electronic media. Almost all of the other terms listed above indicate some form of New Theatre and do not necessarily connote any use of electronic devices; the exceptions are Expanded Cinema and crossmedia, both of which were rejected as arbitrary decisions by this author. Of those two terms, the former refers to many other types of communication besides mixed media, and the latter sounds a bit clumsy.

Admittedly, both multimedia and intermedia can be semantically defined as being identical to mixed media. Still, the past twenty years' usage of all these words should bear out the decision to use mixed media as the super-category word of this study, with multimedia as a topic within electronic mixed media. (see Chart I). Under these arbitrary conditions intermedia may be used as a synonym for multimedia.

CHART I

Media Interrelationships
(Incomplete)



When setting the definitions for the limits of this study, the author had to make many arbitrary decisions. The first choice was to eliminate all forms of mixed media — from the earliest rituals to the most recent opera — which do not use electronic communication devices. Within the range of possibilities left to explore, some further pruning had to be done. Thus the judgement was made to draw a line between events that juxtaposed separate elements and events that used different elements to present a redundant message.

Multiple images on one frame of film have been used from the first years of this century, but these multiple images constitute an extension of montage used to develop a single narrative. When multiple images grew to multiple screens there was no change in the basic concept of several images telling the same story. In the 1960's, the communication form known as the slide show established itself as a prime example of a multiscreen presentation. Still, the use of multiple slide projectors is often an economic decision in lieu of a wide-screen motion picture; for this reason, many slide shows prove themselves to be equivalents of one-screen films.

The majority of multiscreen films or slide shows currently produced in this country are evaluated by this author as being one-screen film equivalents. Cinerama and Circarama are obvious examples of multiple screens being used for panoramas, not for juxtapositions of separate messages. Even slide shows are often synchronized to their soundtracks, in which case they become as much of a contained medium as a sound film.

The point to be made is that separate machines do not necessarily equate to separate communications media; each presentation must be classified by its own format and content. Multiple screens of slides or film -- or even just one screen of visuals -- juxtaposed with a separate-message soundtrack is a multimedia presentation. A multiple screen film such as WE ARE YOUNG (Expo 67) is not multimedia. The concurrent use of still projections and moving projections (including video images) is certainly electronic mixed media and may be multimedia as well. However, when these concurrent projections are put in the context of an illustrated lecture, the single-narrative qualities of the event usually override the effects of multiple delivery. Multimedia does not preclude classroom lectures, but most "multimedia lectures" observed by this author were very traditional lectures with multi-illustrations.

Perhaps Grace Glueck's description of this "new method of communication"[202] summarizes the multimedia situation better than this entire appendix:

> Its jarring combination of stimuli -- sounds, sights, colors, smells, and moving images -- aim at reaching audiences by a saturated attack on all the senses, not just eye or ear. The multimedia technique is helping to convey information, provide entertainment, create aesthetic experience, sell products and even further medical research.[203]

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[202] Grace Glueck, "Multimedia: Massaging Senses for the Message," The New York Times, September 16, 1967, p. 35.

[203] Ibid., p. 35.

Appendix II

Chronology of Significant Multimedia Events and Related Events

*indicates works described in the text
+indicates works designated by the author as multimedia

1900 Rauol Grimoin-Samson displayed his Cineorama exhibition at the Paris Exposition; his process was sometimes referred to in Russian literature as Cinecosmorama. The travelogue "balloon ride" was truly grand in scale, taking viewers via film to Brussels, England, the Riviera, Spain, Tunis, the Sahara, then back to Paris.*

1903 Edwin S. Porter's AMERICAN FIREMAN used what is considered to be the cinema's first split-screen shot — a vignette of the fireman's wife and child in an upper corner of the screen while the rest of the screen showed the sleeping fireman. This film also had the first American use of the principle of editing, developed about 1901 in England by G. A. Smith.

1904 St. Louis became the first public school system to hire an Audio-Visual Director. Amelia Mussiner became the Curator of the Education Museum at the same time the school board authorized the purchase of the school's permanent exhibits at the 1904 Lousiana Purchase Exhibition (a huge fair which was held in St. Louis).

Films were used as scene transitions in the Japanese *Shimpa* plays; this introduced film to the stage in Asia.*

1908 Charles Ives, an American composer who was influenced by the writings of Emerson and Thoreau and greatly admired by Schoenberg, wrote *The Unanswered Question*. This work called for two separate groups of musicians and a soloist to all perform independently of each other, without even rhythm synchronization; the work was not performed for many years because musicians refused to cooperate with the composer's intentions.

1909 Winsor McCay began his film/actor stage show with *Gertie the Dinosaur*; this act was, presumably, the beginning of film on the stage in America.*

Tomasso Marinetti published the first *Futurist Manifesto* on February 20th in Milan.

The first use of phonographs in public schools began in Milwaukee.

1910 Vsevelod Meyerhold advanced the idea of Environmental Theatre with his lively production of Don Juan.*

1911 Film and actors came to Europe with the German productions of Eine Million and the Rund um die Alster review.*

Max Reinhardt inagurated total Environmental Theatre with his London production of The Miracle. The Olympia Exhibition Hall made a good setting for transformation into a Gothic cathedral since it had dimensions of 440 feet in length, 250 feet in width, and 100 feet in height.*

In May, the Futurists opened their first major exhibit in Milan. From there the show toured Paris and the other major art centers of Europe, building up support for Futurist ideas and products.

1915 D. W. Griffith's BIRTH OF A NATION was released as the first American film spectacular, pushing the industry into an even more solid position; this film incorporated split- and triple-split-screen effects, thus strengthening the idea of multiple imagery begun by Porter.

Alexander Scriabin's Prometheus -- a musical work written in 1910 to be performed with colored light projections -- was done for the first time as written in Carnegie Hall on March 20th. The critics were not impressed with the light show, and further works of this sort were not performed for many years.

1916 On February 5, the Cabaret Voltaire opened in Zurich to handle the antics of such Dada stars as Hugo Ball, Tristan Tzara, Jean Arp, Richard Huelsenbeck and Marcel Janco. Only Janco does not have a story attributing the origin of "Dada" to him. The first public reference to the movement came in an article written by Ball in the only issue of Cabaret Voltaire, published in June. The first Dada Soiree was held on July 14 at Salle zur Waag; Tzara read the first Dada manifesto on this occasion. Other soirees are described in the text.*

1917 The Chicago public school system was the first to have a slide library when the volunteer school-aid group, the Chicago Projection club, grew unwieldy and donated 8,000 slides to the Board of Education. The same year, a film library was begun in Chicago; other film libraries were begun in Newark in 1918, Detroit and Kansas City in 1919, and Los Angeles, Buffalo, and New York City in 1920.

1918 The Inter-Church World Movement (an American-based Protestant group) set up motion picture and slide departments; both of these media had been used by churches since the first years of this century. Dr. H. H. Casselman headed the film department.

1919 Herman Rosse used projected scenery in The Drama of the Nativity and the Massacre of the Innocents, presented at the Chicago Art Institute. This is claimed by Rosse to be the first use of projected scenery in America.

1920 The Dadaists held an exhibiton in the back room of a Cologne cafe, accessable only through the public urinal. This April show featured a little girl in a first communion dress who recited obscene poems and an Arp wooden sculpture with an axe attached so that visitors could destroy the work. The police closed the show, but it reopened when the judges realized that the most objectionable work was Durer's engraving of Adam and Eve.

1921 From June 6-30, the Paris Galarie Montaigne held Solon Dada, Exposition Internationale, the last major Dada show. Marcel Duchamp refused to send his works to the exhibition, so his catalogue numbers were shown instead.

1922 An American, John D. Elms, invented a camera with two lenses to shoot 2-screen 35mm films; his device was unsuccessful, due to projection difficulties. Muybridge had developed multiple lens cameras years earlier for his motion series.

Lee Simonson claims honors as the first to use the Linnebach projector in an American stage play.

1923 In February, Meyerhold did his Environmental Theatre production of The Earth in Turmoil, also utilizing filmed titles for the first time in one of his productions.*

In March, at the Proletkult Theatre in Moscow, Sergei Eisenstein directed Ostrovsky's Enough Simplicity in Every Wise Man, using a short comic film of the protagonist, Glumov, changing into such things as a donkey and a machine gun. This film was a parody of the contemporary Russian newsreel Kino-Pravda.*

The first modern planetarium (using projections for astrological effects) was opened on October 21 in the German Museum, Munich. It was developed by Dr. Walther Bauersfeld of Zeiss Optical Works.

1924 Reinhardt's New York production of The Miracle opened on January 15th, enjoying a successful run until November 8th. Afterward, the play toured other large American cities from Cleveland to Los Angeles.*

On May 26, in Berlin's Volksbuhne, Erwin Piscator presented Alfons Paquet's Fahnen (Flags), in which he used projected titles for the first time.

Eisenstein staged Gas Masks in the Moscow Gas Works.*

Andre Breton published the first Surrealist Manifesto.

Kirt Schwitters transformed his Hanover home into the first Merzbau.*

Laslo Maholy-Nagy designed a "Theatre of Totality" for actors and three screens of film; this theatre, along with other Bauhaus designs for projection/actor theatres, was never built.

The Francis Picabia ballet Relache (Performance Cancelled) was performed in Paris at the Theatre des Champes-Elysees by the Swedish Ballet. The ballet was strange enough -- with the dancers smoking, costume changes taking place on stage, a "fireman" pouring water into buckets, a nude couple standing near the edge of the stage in Cranach's Adam and Eve pose, and Man Ray sitting in a chair on stage and occasionally walking around -- but the intermission featured the wild Dada film, Entr'acte (Intermission) by Rene Clair. This was the first ballet that had incorporated a film. Supposedly there was a soundtrack by Erik Satie, but this is now lost; Picabia claims that he wanted the soundtrack to be audience noises, but they would not respond even when he beseeched them.

1925 The Bauhaus moved from Weimer to Dessau, where the school was housed in quarters designed by Walter Gropius; many progressive theatre productions were done at the Bauhaus until Nazi pressure closed the school in 1933.

Robert Flaherty's film TWENTY-FOUR DOLLAR ISLAND was used as a projected background for the ballet "The Sidewalks of New York," done at New York City's Roxy Theatre.

The first Surrealist exhibition was held in the Galerie Pierre in Paris.

Eisenstein released his second film, THE BATTLESHIP POTEMKIN, with simultaneous-viewpoint effects known as montage.*

Piscator did Trotz alledem in Berlin during July. This play, with scenery by John Heartfield and music by Edmund Miesel, used a newsreel film collage.*

1926 Able Gance released NAPOLEON, the first multiple-screen dramatic film.*

Piscator presented Sturmflut in the Berlin Volksbuhne in February, with scenery by Edward Suhr and perspective-extension films by I. A. Hubler-Kahla.*

Gropius designed Piscator's unrealized Total Theatre.

1927 The first feature film with sound accompaniment, DON JUAN, was released in August. The sound was provided by the Vitaphone process -- a 17-inch amplified record. Another Warner Brothers film, THE JAZZ SINGER, was released in October, also with Vitaphone sound. The latter is considered the first sound film since the sound was synchronized to song and speech, rather than being used merely for background sound.

Claude Autant-Lara developed a 3-screen process known as Hypergonar. There is confusion as to whether this was three separate screens or three images on one frame of film. Whatever the process was, it constituted the only continuance of Able Gance's Polyvision.*

Piscator's production of Hoppla, Wir Leben! opened on September 3rd at the Piscator-Buhne, with scenery by Traugott Muller, projection by John Heartfield, newsreel film by Kurt Oertel, music by Edmund Miesel, and choreography by Mary Wigman.*

Piscator's version of Alexei Tolstoy's Rasputin (adapted by Piscator, Felix Gasbarra, Leo Lania, and Bertolt Brecht) was done at the Piscator-Buhne, opening on November 10th. The scenery was designed by Traugott Muller, the film was made by I. A. Hubler-Kahla, and the music was written by Edmund Meisel. For this play, a hemispherical scaffolding was constructed on a revolving stage, so that each scene change was wheeled around in front of the audience. Projection material was streched upon the 52-foot diameter, 26-foot high acting area so that each of the fifteen sets had its own screen. In addition a balloon-like screen above the acting area received the prologue film, a collage history of Czarism and the personal history of Nicholas II. This collage was made up of the Russian newsreel The End of the House of Romanov (1927) and seventeen feature films from Europe and America.

1928 The Good Soldier Schweyk opened on January 23rd at the Piscator-Buhne; this play was adapted by Piscator, Gasbarra, Lania, and Brecht with film by Hubler-Kahla, music by Meisel, and scenery and animation by George Grosz.*

Brecht's Three-Penny Opera was his first commercial success, and this play continued the acceptance of Epic Theatre, which had begun with Piscator.

The first all-sound film (the earlier ones had sound in only certain segments), THE LIGHTS OF NEW YORK, opened in New York in July.

Man Ray furthered the use of multiple images on a single frame of film when he used twelve simultaneous images in some segments of his L' ETOILE DE MER.

1930 Clarence Schmidt began his Woodstock habitation Environment.*

In June, Franz Hoerth did his production of Christophe Columb, using film to reveal the psychological innerworkings of the characters.*

1932 Oskar Fischinger's Experiments in Hand-Drawn Sound (an experiment in scratching a soundtrack directly onto a film) was first shown.

The Visual Instruction Association of America, The National Academy of Visual Instruction, and The Department of Visual Instruction of the National Education Association merged, retaining the title of the latter organization. This group continues as the primary source of research and information concerning audio-visual usage in American public schools. In 1950, the title of the organization was amended to The Department of Audio Visual Instruction.

1935 Len Lye made COLOR BOX, the first film made entirely by drawing and painting directly on the film stock.

Able Gance made a 1-screen replay of NAPOLEON, onto which he added the first stereo soundtrack.

The Living Newspaper began the first of their 4-year series of productions.*

1936 Mary Ellen Bute and Leon Therme produced RHYTHM IN LIGHT, the first of a series of abstract color pattern/electronic music films.

Burian did his production of Fruhlings Erwachen, which blended slides, actors, and films into a stageful of activity.*

From December 9th until January 17th of the next year, the New York Museum of Modern Art held its historic Fantastic Art, Dada, Surrealism show organized by Alfred H. Barr. This was the first major introduction of these new European trends into the American art world. As had been the case with the equally historic 69th Street Armory show in 1913, American critics were stunned by the exhibition and reacted in various ways. As had also been the case with the 1913 show, which introduced Americans to Cubism and Futurism, the new show left its imprint on American art. Surrealism found its way into Abstract Expressionism and the early Happenings, while the Dada spirit is still manifesting itself in all forms of the arts.

1937 Fred Waller developed his first version of Vitarama (eleven screens of 16mm film on a hemispherical surface) in conjunction with Ralph Walker for the oil industry pavilion for the 1939 World's Fair.*

The Paris Exposition featured the Palace of Light, where Henri Chretien showed a super wide-screen film (297 feet wide, 33 feet high) using two projectors with anamorphic lenses. There were metal fingers 3 feet in front of the projectors to blur the frame edges and provide a complete panoramic cinema sweep.

1938 During January and February, the Exposition Internationale du Surrealisme was held in Paris.*

In September, the Olson and Johnson review Hellzapoppin opened on Broadway.*

John Cage, influenced by the Futurist Luigi Russalo about the idea of noise as art music, made his first "prepared pianos" by attaching wood, metal, and objects to the piano strings.

Waller and Walker's Vitarama for the 1939 World's Fair (five screens of 35mm film) was rejected by the oil industry, so Vitarama was transformed into a series of gunnery training devices for the U. S. military.*

1939 Piscator fled from Europe and became a director at the Dramatic Workshop of the New School for Social Research in New York City. He remained there until 1951.

1940 Walt Disney's FANTASIA (a blend of animated cartoons and symphonic music) became the first film in America to be shown with stereophonic sound; the New York showing utilized ninety-nine speakers.

1942 Another major Surrealist show was held in New York, this one at 451 Madison Avenue. The exhibition ran from October 14-November 7 and featured an environment of miles of twine strung around the gallery by Duchamp.

1945 John Cage and Merce Cunningham collaborated on a ballet that featured the film VISUAL VARIATIONS ON NOGUCHI as a background for the dancers.

1946 The San Francisco Museum of Art held the Art in Cinema festival, the first substantial display of avant-garde films on the West Coast. The programs were the following: (1) "Some Precursors" (2) "The French Avantgarde" (3) "Continental Avantgarde" (4) "Non-Objective Form Synchronized with Music" (5) "The Animated Film as an Art Form" (6) "Contemporary Avantgarde Film in America" (7) "Fantasy into Documentary" (8) "Experiments in the Fantastic and the Macabre" (9) "Poetry in Cinema" (10) "The Surrealists." Virtually all existing major avantgarde films were shown in these programs.

1947 In the Paris Galerie Maeght during the months of July and August, the last major show of Surrealism as a functioning movement was held. Exposition Internationale du Surrealisme was organized by Breton and Duchamp and featured almost every major artist associated with Surrealism.

1948 Seagram Distillers sent a 5-screen/"actor" show around the country to be shown at sales meetings.*

The Living Theatre troupe (one of the finer Off-Broadway groups) was begun by Judith Malina and Julian Beck. This contemporary drama group now gives some of the most exciting theatre presentations (recent example, Frankenstein) to be found anywhere.

1949 Pierre Schaeffer and Pierre Henry wrote Symphone sour un homme seul (Symphony for One Man), one of the earlier landmarks in concrete music. This music was a combination of electronic sounds and taped sounds.

1950 The TelePrompTer Corporation began its Telemation system (usually five screens of slides and film plus sound from microphones, phonographs, and/or audio tape). No actual accounts of these Telemation units being installed is reported until the late 1950's.

The first film/actor play by Josef Svoboda and Alfred Radok, The Eleventh Commandment, opened on June 17 at the State Film Theatre in Prague.*

1951 Robert Motherwell wrote The Dada Painters and Poets, a collection of essays written by the originators of the movement; this book had some noticable influence on the younger New York painters of the time.

Cage and Cunningham composed 16 Dances by methods of chance. Toss of a coin determined the type and order of the dance movements as well as the structure of the music.

Cage composed Music of Changes completely by means of coin-toss.

Cage composed Imaginary Landscape no. 4 for twelve radios and twenty-four performers -- one person for each volume and tuning knob.

3-D films by L. P. Dudley and R. and N. Spottiswoode were a great hit at the TeleKinema festival in London, but commercial producers hesitated at following up on this success. They balked at the inconvenience of the special glasses, but after the novelty of Cinerama made a big hit the next year, 3-D came into its own limited prominence in the mid-1950's.

1952 The Paris Opera added smells to its production of Les Indes Galantes; a similar feat dated back to 1868 in London's Alhambra Theatre during a dance number in The Fairy Acorn Tree.

Cage composed his famous 4' 33" for silent piano.

Cage held his celebrated "happening" during the summer at North Carolina's Black Mountain College. This author begins the chronology of true multimedia with this performance.* +

The theatre version of Cinerama had its first showing when THIS IS CINERAMA opened in New York City on September 30th.*

On November 17, Hollywood premiered BWANA DEVIL, the first commercially-successful 3-D film.

1953 Merce Cunningham's Collage used fifteen untrained "dancers" to perform simple movements like running and hair combing.

Samuel Becket's Waiting for Godot became the first commercial success of the Theatre of the Absurd.

The first educational television station, KUHT in Houston, began broadcasting on May 25. The first officially licensed educational television station, WCET in Cinncinnati, began on March 11, 1955.

Early in the year, Charles Eames and George Nelson presented their multimedia "Sample Lesson" at the Art Department of the University of Georgia. The presentation consisted of eight segments: (1) a 10-minute film on communication needing a message, a transmitter, and a receiver capable of understanding, (2) ten minutes of 3-screen slide fixes and taped music -- this section concerned visual communication, (3) a 10-minute film on transmitter-receiver relationships, (4) eight minutes of 3-screen slide fixes and audio tape on the concept of abstraction. One example of this section was the juxtaposition of Picasso paintings, maps, and the Notre Dame cathedral in Paris, showing how they all are abstractions. The movement up into the cathedral was intensified by opening up from one to three screens of slides, by building organ music to a cresendo, and releasing odors of incense into the room, (5) a 4-minute black and white French film about the origins of lettering and calligraphy, (6) three minutes of a UPA color film on "animated calligraphy of sound," (7) a 10-minute 16mm color film by Ray Garner on ancient Egypt as a dead civilization transmitting live messages, (8) a 10-minute color film on the processes of communication. All original film was made by Eames, and the slides were made by Nelson.* +

1954 Varese released Deserts, the first large orchestral composition for instruments and taped electronic music.

Robert Breer made Image by Image I -- a 10-second loop of 240 individual frames -- and won for himself the distinction of making what was probably the first film with absolutely no continuity. Viewers managed to see patterns in the film anyway.

1955 Robert Rauschenberg made Bed by splashing paint on his quilt and pillow, then hanging these vertically on the wall. This was not his first "combine" of paint and real objects, but it was the earliest one to catch the attention of critics.

Disneyland opened in Anaheim, California and contained such attractions as the 360° projection environment Circarama * and the Monsanto Chemical Corporation's Rocket to the moon. The "Moon Ride" was a much more sophisticated use of environmental projection than Circarama, since the theatre was incorporated into the floor and ceiling circular projections. Visitors sat around the floor screen, where they could see simultaneous projections of the earth receding on the floor and outer space advancing on the ceiling, as if the auditorium were an actual spacecraft. Lighting and vibration effects in the small, circular auditorium added to the total feeling of a space ride. This exhibit is merely an updating of the Cineorama environment, but still it was one of the very few uses of environmental projection that brought the viewing area into the total concept of the display. Some theatres are just now getting into effects such as the Moon Rocket, and claiming that their productions are new discoveries. An item of interest to this subject (and one that has gone virtually unreported) is the current state of the Disneyland Moon Rocket, now that moon travel is an actuality.

The Japanese Gutai Group, the originators of Events, gave one of their first public performances at the Ohara Hall in Tokyo in October.*

1956 The Texas Baptist minister Howard Moody became pastor of New York City's Judson Memorial Church and steered the church activities toward the present program of avant-garde presentations. Judson Memorial Church was one of the chief locations for development of New Theatre and multimedia in the late 1950's and throughout the 1960's.

1957 Allan Kaprow made his first Environment in an unused barn near his New Jersey home.*

Henry Jacobs and Jordan Belson began their series of Vortex concerts in San Francisco's Morrison Planetarium. * +

On Sunday, December 8, the Gutai Group received attention on the front page of the art section of The New York Times.*

Stan VanDerBeek made Vision III, a presentation using three screens of film and slides.

1958 Rauschenberg had his first one-man show, at the Leo Castelli Gallery in New York City, where his combines caught the attention of many artists, writers, and critics.

The Congressionally-approved National Defense Education Act allocated funds for new research into the use of electronic media in the public schools.

Allan Kaprow showed his first Environment at the Hansa Gallery March 11-29; he held his first Happening on April 15, at Douglass College, Rutgers University, New Brunswich. This first Happening was presumably considered a private affair by the Happening expert Michael Kirby, since Kirby does not treat the Douglass College Happening as the first public example of this art form. Other writers have called John Cage's untitled 1952 lecture the first Happening, but this is mostly a semantic problem. Kaprow's Happenings are derived in concept from Cage, and Kaprow was even a student of Cage's when official Happenings were christened.*

The English version of Artaud's radical theatre book, The Theatre and Its Double, was published.

The Brussels Universal and International Exposition (a first-category World's Fair) was held on 1,500 acres of Heysel Park in Brussels from April 17-October 19. There were well over forty-one million visitors to this Fair. Among the exhibits were Cinerama, the Vortex concert, Laterna Magika, Circarama, Panorama, Aviorama, Congorama, and Polyekran.* Besides all of these multiscreen exhibits, there was also a sound work in the form of a Vasere tape, Le Poeme electronique. This electronic composition was played on 240 speakers in conjunction with a LeCorbusier film, although there was no prior coordination of the tape and film. This multimedia work was presented in the LeCorbusier Pavillion.+

1959 Rauschenberg made two of his most memorable combines, Monogram (which featured a stuffed goat with a tire around its middle) and Canyon (which had a stuffed eagle and a pillow projecting from the canvas). This was also the year he did the radio painting, Broadcast.*

Ford Motor Company sent a 12-minute, 4-screen, color presentation called "The Search for Suburbia" to suburban shopping centers. The four screens of 16mm film made a viewing area 31 feet wide; usually four separate images were shown.

The U. S. and the U. S. S. R. traded national exhibitions, with the Russian display (including Kinopanorama) in New York June 30-August 10. In Moscow, there was an American pavilion with Circarama and Charles Eames' 7-screen Glimpses of the U. S. A; there was also a Russian pavilion with another edition of Kinopanorama -- the Russian super version of Circarama.*

Svoboda's production of Jejich Den (Their Day) opened on October 4 at the Tyl Theatre in Prague. O. Kreja directed this play which had nine mobile screens; two screens rotated on their horizontal axes, three rotated on vertical axes, one hung free, one could fold up, one could move across the stage, and the last one had curtains on all four sides so its size and shpae could be changed. * +

Kaprow's 18 Happenings in Six Parts was given for the first time on October 4th at the Reuben Gallery. This work has been designated by Michael Kirby as Kaprow's first public Happening. In addition to performers, the work incorporated slides, audio tape, and records. 18 Happenings is one of the few pieces of this type to be classified as multimedia by this author.* +

The World Agricultural Fair in New Delhi featured a 5-screen Telemation exhibit for the U. S. Departments of State, Agriculture, and Commerce. This Fair, which ran from November of 1959 through February of 1960, attracted thousands of visitors including Dr. John Guy Fawlkes of the University of Wisconsin's School of Education. His enthusiasm for the exhibit led to the first Multimedia Instructional Laboratory in 1961.

Charles Weiss used his AromaRama to add smells to Walter Reade, Jr.'s China travelogue named Behind the Great Wall.

1960 A teaching machine which combined a tape recorder with a slide or filmstrip projector was put into use at the University of Wisconsin. The mixed-media machine worked on the reinforcement principle, because it asked a question on tape (and showed a picture to augment the question) and then did not advance to the next question until a correct response had been marked on a special answer sheet. This device was only one example of many teaching machines which used audio-visual aids; all types of these machines were put into experimental use in the early 1960's.

On February 29th and March 1st and 2nd, a series of theatre works known as the Ray Gun Specs were presented by Claes Oldenberg and Jim Dine at the Judson Memorial Church. Al Hansen's part in these shows was to project hand-held films around the environment. One example was film of airplanes and parachutists projected on the walls and ceiling.

In April, the Gutai Group sponsored the International Sky Festival on top of the Takashimaya Department Store in Osaka; for this Event, paintings were hung from large balloons. The American painter, Al Leslie, participated in the festival and then informed Kaprow of the activities of the Gutai Group.

In June, the Martha Jackson Galleries held the show "New Media-New Forms" in which there were assemblage sculptures by Schwitters, Arp, Rauschenberg, Jasper Johns, Kaprow, Louise Nevelson, John Chamberlin, and Oldenberg. Sculpture was being considered in a new light since the previous March 17th, when Jean Tinguley's machine Homage to New York destroyed itself in the garden of the Museum of Modern Art.

In November, the Reuben Gallery in New York hosted Robert Whitman's Happening, *The American Moon*. This work made especially good use of film as a non-objective element in theatre.*

Standish Lawder made the first version of his kinetic slide show, *The March of the Garter Snakes*. Juxtaposition of sound with this abstract visual show qualifies this piece as multimedia.* +

1961 In January, the University of Wisconsin opened its Multimedia Instructional Laboratory, built by the TelePrompTer Corporation. This facility was the first of its type in a public education situation, and it was also the first audio-visual mix to go by the name of multimedia. * +

In March, Purdue University installed film projectors in its foreign language labs, augmenting the tape recorders which already existed in these facilities.

Also in March, the San Francisco Actors' Workshop did a version of *King Lear* (directed by Herbert Blau) that used taped electronic music by Morton Subotnik during the storm scenes.

George Segal and Edward Kienholz both gained public attention for building complete Environmental sculptures from found objects. Segal also added cast-plaster figures.

Rauschenberg executed *Pantomine*, in which two functioning electric fans were incorporated into the canvas to give the illusion of blowing the splattered paint. The sense of ambiguity between the fans' movement and the paint's solidity was quite striking.

Roberts Blossom began presenting his *Filmstage* series of actor/film/slide/audio-tape theatre combinations. * +

The Italia exhibition used a version of Circarama that was changed from the original format * to a format of nine screens and stereophonic sound.

Francis Thompson made his 3-screen film ATOM for the Atomic Energy Commision to send on a tour of Latin America.

In October and November, the Museum of Modern Art presented a massive show, "Art of Assemblage," which so effectively summarized the 1950's junk sculpture trend that the movement was virtually dead thereafter. By early 1962, popular culture objects were being treated in a more refined way by the emerging Pop artists.

1962 In April, the Department of Audio Visual Instruction (DAVI) of the National Education Association held a convention in Kansas City at which James D. Finn and Robert O. Hall presented a 3-screen slide/film/audio tape show (Dimensions of the Audio Visual Revolution) about contemporary audio-visual technology. The show was well received by the convention delegates and furthered the concept of "multimedia" in education; however, reports indicate this show was more of an illustrated lecture than a true multimedia combination.

Kenneth Issacs built his "Think Box" educational cube, in which a person was bombarded by twenty-four slide images and four speakers of sound. Accounts of this device indicate that enough juxtaposition of separate ideas was being used for this to be considered a multimedia Environment. * +

Rauschenberg produced Barge, a 6-by-32 foot horizontal canvas in which he combined organic paint manipulation with silk screen images of satellites, car keys, trucks, highways, people, birds, diagrams, cities, atheletes, and the Velasques Venus. These multiple photographic images give the effect of a massive multiple-screen slide and/or film show. Surely works such as this one were influential on the New York filmmakers who were in contact with Rauschenberg.

The Seattle World's Fair -- Century 21 -- ran from April 21st through October 21st and attracted over ten million visitors to its 74-acre site. Included among the exhibits was Eames' House of Science, a 6-screen, 15-minute film about the wonders of modern science. This presentation has become a permanent attraction at the park which remained on the Fair's site.

Tom Wesselman began his Great American Nude series of Pop paintings which often employed real objects in a sort of Environment situation.

Svoboda's production of Romeo, Julie a tina (Romeo, Juliet and the Darkness) was first given on September 14th at the State Theatre in Brno. This play by J. Fischer was directed in Brno by V. Veznik; H. Thein directed the Prague National Theatre version which opened on October 12th. Many mobile cubes with one side covered by a scrim screen were used in this production; only black and white slides were shown on the scrims. The play had a theme of man being ground down by the mass media of modern civilization.

Pop Art was given its first major introduction to the public in two exhibitions: New Paintings of Common Objects, held in September at the Pasadena Art Museum, and New Realists, held October 31-December 1 at the Sidney Janis Gallery. Included in these shows were multiple image works by Warhol, and juxtaposed images on a huge scale by Rosenquist.

Gerd Stern had his first one-man show of kinetic poetry at Allan Stone's New York gallery in December.

1963 Several accounts indicate that 1963 was the year in which public schools began using "multimedia" visual-sound mixes, which had first been developed at the college level. This by no means indicates that public school "multimedia" was widespread before the late 1960's, but it was fast gaining acceptance in the East and Midwest at this earlier period.

Warhol's SLEEP, a multihour film of a man sleeping, was originally shown in New York with two transistor radios set on the stage tuned to different rock music stations.

Whitman presented Water in Los Angeles on September 20th and 21st. This Happening made good use of juxtaposition of the filmed and live presence of the same woman. *

Gerd Stern often presented "Mosaic," a poetry reading accompanied by slides of New York Pop Art.

On November 12, concurrent wih the opening of Gerd Stern's show at the San Francisco Museum of Art which contained the sculpture/poem "Contact Is the Only Love," * + Stern and other nucleus members of USCO presented their first multimedia performance. This work, entitled Who R U and What's Happening? used slides, closed circuit and commercial television broadcasts, audio tapes, and amplified conversation from twenty stage participants. * +

1964 USCO's Verbal American Landscape, a combination of slides, films, and audio tapes, was given at the University of British Columbia and at the University of Oregon in January. * +

On February 27th, Elaine Summers presented Fantastic Gardens at the Judson Memorial Church. Screens were hung at both ends of the church to catch images from four stationary projectors and one hand-held projector. Single, multiple, and overlapped images were thrown on the screens, walls, columns, and people in attendence. The audience had small mirrors so that the projections could be even further diffused around the building. Unfortunately for the interests of this study, nothing is recorded about the nature or content of the projections.+

Alvin B. Roberts and Don L. Crawford made a 3-screen slide/film/audio tape lecture about the Civil War as part of a coordinated media approach to teaching high school subjects. This presentation is only one example of many mixed-media school and business lectures done in this period. *

The XIIIth Triennale in Milan featured the industrial-display Environment "Introductory Section-Leisure Time," which made use of massive spaces and eerie darkness to present a wierd look at advertising bombardment. * Another display the same year was Victor Wurgler's Polyvision projection dome. Visitors stood on a central platform in the dome where they saw images on 8,000 feet of hexagon and pentagon screens. Wurgler used slides to create tranquil total environments around the spectators, rather than the feeling of motion which was inherent in the Circarama environment. Since rear projection was used, the room lights could be left on in the dome.

During April, USCO's Verbal American Landscape traveled to Salt Lake City, Minnesota's Carleton College, and the University of Wisconsin at Madison. At Madison they introduced Kodak Carousel projectors into their performance. * +

On Good Friday, Stern and Michael Callahan (also of USCO) delivered a special sculpture to the nuns at Los Angeles's College of the Immaculate Heart. The work, called Resurrection, was made by modifying a pinball machine to flash such words as "High," "Free," "Safe," and "Resurrection." The trick was that a nickle had to be deposited in order to turn the machine off.

Kienholz completed The Beanery, a macabre sculpture set inside an actual beanery hut.

Marshall McLuhan's Understanding Media was published.

In September, Karlheinz Stockhausen's Originale (directed by Allan Kaprow) was presented in New York City's Judson Hall. This chaotic event used live performers, animals, live and taped sound, film, and closed circuit television. * +

The New York World's Fair -- "Man's Achievements in an Expanding Universe" -- ran from April 22, 1964 until October 17, 1965. Because of the length of the Fair and because the Seattle Fair was supposed to be the only official World's Fair in the U. S. in the decade, the New York Fair was refused official sanction by the Paris International Exposition Association. Since the Paris Association boycotted the New York Fair for its thirty member nations, most of the national pavilions at the 1964 Fair were sponsored by private businesses. The Fair (held on the same site as the 1939 New York World's Fair) was large -- 646 acres -- and well attended — over fifty-one million visitors -- even though there was much criticism about the prices and poor planning. Exhibits included the following: Laterna Magika; "Wonderful World of Chemistry," a DuPont version of Laterna Magika in which Michael Brown directed three movable screens and live actors in a slick but empty presentation; the KLM Cinerama show which was on a planetarium dome and also categorized as impressive but meaningless; the New York State Pavilion which featured an 8-screen, 100-foot diameter replay of Cineorama; Environmental Cinema, a 15-minute ride through 130 screens of American history images; To Be Alive, a 3-screen film for Johnsons Wax by Francis Thompson and Alexander Hammid, which received the 1965 Oscar for the best short documentary; Think by Charles Eames for the IBM Pavilion. This last exhibit seems to have been the most imaginative, although it also received much criticism for its lack of substantial content. 500 viewers sat in a "people wall" of tiered seats which was hydraulically lifted 60 feet up to the theatre. The show itself was a razzle-dazzle blend of a live announcer and multiple screens of slides and film. Accounts differ on the number of screens used, with estimates ranging from eleven to twenty-two; sixteen is a number given more frequently than any other.

USCO's Verbal American Landscape was given at the University of Rochester in early October. * +

1965 One example of the many unreported mixed media worship services from the mid-1960's was done by David Wood, an art major at Case-Western Reserve University in Cleveland, Ohio. This service, sponsored by the University Christian movement, used readers, three slide projectors, hymns, and a communion meal among the participants.

Rauschenberg completed Oracle, a five-piece environmental sculpture equipped with radio receivers. *

At the ONCE AGAIN festival in Ann Arbor, the ONCE group did "Unmarked Interchange," incorporating live actors into the same large screen that showed the film TOP HAT. * +

Stan VanDerBeek published a Manifesto, calling for multiple screen environments (such as his Movie Drome) "both to deal with logical understanding and to penetrate to unconscious levels, to reach for the emotional denominator of all men, the nonverbal basis of human life." (Youngblood, Expanded Cinema, p. 387.)

VanDerBeek made the 3-screen film VARIATION 5 which blended Merce Cunningham's dance, astronauts' space walks, and Nam June Piak's distorted television images. +

Filmmaking became more accessable to all when Kodak introduced Super 8 cameras and projectors, complete with cartridge loading and automatic exposure.

Svoboda presented Intoleranza in Boston during February, using film and video tape projection, closed circuit broadcasting, and remote broadcasting. * +

James Rosenquist filled the Leo Castelli Gallery with his 10-by-86 foot painting, F-111. This huge series of panels showed the profile of an F-111 broken by such images as spaghetti, a bomb, a girl under a hairdryer, a tire, and a cake.

In April, the Howard Wise Gallery in New York presented the first exhibition of computer art. Reviews were mixed, but encouragement was given to filmmakers to continue development of computer animation films.

In April and May USCO presented the Verbal American Landscape at Brandeis University, adding stroboscopes and an oscilloscope to the previous effects. * +

The Dutch Pavillion at the International Exhibition of Transport and Communication in Munich featured a large rectangular exhibition hall where films were shown on three large screens. One of the screens, 20-by-60 feet in size, hung on an end wall of the room, the other screens, circular in shape, were on the long walls above quarter-circle ponds which reflected the images. This was designed by Wim Crouwell of Total Design in Amsterdam. Another impressive display from the Munich gathering was the Transport Exhibition of the German Federal Railway. Sixteen screens were hung in four rows from scaffolding (giving the feeling of a railway station) and sixteen film strips were projected from projectors mounted near the ceiling. The films were loops of different lengths, so the images were not repeated in the same order. The soundtrack had speech and electronic music.+

The First Theatre Rally was organized in New York in May by Steve Paxton and Alan Solomon. Included in this series of performances were Carolyn Brown's Balloon (a 20-by-30 foot weather balloon for film projections, accompanied by dancers) on May 11-13, Rauschenberg's Spring Training (which included a dancer with a small screen tied to her back) on May 11-13, and Robert Whitman's The Night Time Sky (a Happening in a tent-like space, with sounds, performers, and projections * +) on May 14-16. Also at this festival, Whitman displayed one of his film/sculptures; "Shower" consisted of a shower stall complete with running water and a filmed, nude, showering girl projected on the door of the stall. Many viewers were fooled by the illusion, even though the girl was being washed with water of various colors.

Marta Minujin, assisted by the Bell Telephone Laboratories, constructed and exhibited an environmental telephone booth in late June. A person in the booth saw running water on the outer glass and his own image in the closed-circuit television floor, heard wind and echoes and his voice on instant-replay tape from the receiver, and received a Poloroid picture of himself which was taken while he was in the booth.

Don Synder first showed his slide/film/audio-tape spectacular, Spectra-Mach I, in June at the New York City New Theatre's "Psychedelic Explorations." * +

Aldo Tambellini first presented Black Zero, blending slides, film, taped electronic music, and a large black balloon. * +

In November, the New York FilmMakers' Cinematheque ran the New Cinema Festival I featuring Lawder's March of the Garter Sankes; * + VanDerBeek's Move Movies, * + Feedback #1: A Movie Mural, * + and Pastorale: et al; * Ed Emshwiller's Body Works; * Don Synder's Spectra-Mach I; * + Blossoms' Filmstage; * + Oldenberg's Movie House; * Rauschenberg's Map Room II; * USCO's Ghost Rev; * + Whitman's Prune Flat; * Piero Helizcer's The Last Rites; * Angus McLise's Rites of the Dreamweapon (which featured the Velvet Underground in Part III, "The Mysteries of the Essence Chamber" * +) and very enthusiastic audiences.

USCO's Hubbub was given at R. I. S. D., M. I. T., and S. U. N. Y. at Buffalo in December. * +

1966 USCO presented Hubbub from January 18-23 at the FilmMakers' Cinematheque. * +

Svoboda presented J. Offenbach's opera, The Tales of Hoffman, beginning on March 19th at the State Theatre in Wiesbaden, Germany. At least one Svoboda production of this opera used film to show the innerworkings of the protagonist, much the same as had been done years earlier in Christophe Columb. Svoboda indicates that this particular production was done sometime after 1958, and Embler claims the date to be 1962. However, Burian's chronology of Svoboda's productions lists no Tales of Hoffman between 1958 and 1966. For these reasons, this 1966 version of The Tales of Hoffman is listed by this author as the one employing three screens of film in addition to the actors. Embler could easily be correct in saying that the correct date is 1962, but present information on this work is very confusing.

On March 4th and 5th, Michael Kirby staged a Happening named Room 706 in a lecture hall at St. Francis College, Brooklyn. Equipment used included two slide projectors, two film projectors, one overhead projector, colored spotlights, and an audio tape deck for each of three performers. The first segment was the taped conversation between the three performer planners, with each person's speech coming from a different tape deck. Other scenes had films of rehearsals and of people entering the room, slides of the room dimensions, projections of the script, and actors replaying the basic scene that had been repeated on audio tape and film. A complete script is given in Kirby's The Art of Time; the conclusion of the piece was applause on audio tape. +

Warhol released the multihour, 2-screen film THE CHELSEA GIRLS, which was the first commercial success of the underground cinema.

Warhol's rock-light show generally known as "The Exploding Plastic Inevitable" (although this refers properly to the three films only) opened at the Dom nightclub in Greenwich Village. This show had appeared at showings of Warhol's films before April, but the appearances at the Dom were the real introduction of the light show-night club to the New York area. * + After the success of the Warhol review, two rock music-light show clubs opened in New York. The first was Murray the K's World (with twenty-one screens of film, slides, and closed-circuit television); the second was the Cheetah. +

During the summer, Whitman presented his Happenings as a series of weekend Off-Broadway theatre productions. The performances were generally successful, and they marked the first penetration of Happenings into the legitimate theatre.

On September 10th, Svoboda's production of Maxim Gorki's The Last Ones opened at Prague's Tyl Theatre. Alfred Radok directed this tale of a deteriorating family dominated by a military officer. One large, crumpled screen filled the rear wall of the stage, and huge images that often counterpointed or emphasized the stage action were shown on this screen. Only film was used on this screen, but occasionally performers appeared on a balcony within the screen area, much the same as had been done in "Unmarked Interchange." Another unusual element in The Last Ones was the use of clusters of actors performing simultaneously (while still other scenes were shown on the textured screen.).

October 13-23 marked the dates of the "Nine Evenings of Theatre and Engineering" held at New York's 69th Street Armory by the newly formed group, Experiments in Art and Technology (E. A. T.). Billy Kluver of Bell Telephone Laboratories headed the new organization; Robert Rauschenberg was his vice-president. The events presented were: Physical Things* by Steve Paxton, Solo* by Deborah Hay, Vehicle* by Lucinda Childs, Carriage Discreteness* + by Yvonne Rainer, Grass Field* by Alex Hey, Two Holes of Water-3* by Robert Whitman, Kisses Sweeter than Wine* by Oyvind Fahlstrom, Open Score* by Rauschenberg, Bandoneon!* by David Tudor, and Variations VII* by John Cage.

On October 24, Marta Minujin presented her mammoth mass-multi-media Happening, Simultaneity in Simultaneity, in Buenos Aires. This work probably had greater scope in terms of time, complexity, and distance than any work presented before or since. Only Kaprow's Calling (see Tulane Drama Review, Winter 1965) came close to equalling the scale of Minujin's work. * +

Psychedelic celebrations were common in New York in late 1966. Two of the many were Death of the Mind and Quasar. Death of the Mind was presented at the New York Village Theatre, using dancers and several projectors of abstract, hand-painted slides by Jackie Cassen and Rudi Stern. Quasar was done in December at St. Marks-in-the-Bouweire Episcopal Chruch and used music, slides, lights, and dancers. +

Late in the year John Brockman Company (which consisted solely of John Brockman, a graduate of Columbia's School of Business Administration) put together a show for the Scott Paper Company that used the talents of Ken Dewey and USCO plus three slide projectors, one film projector, four stereo soundtracks, three screens of Nyler (an aluminum-like vinyl with more image bounce), and $15,000 worth of expenses. The show was designed to be shown to company salesmen in order to stir up more business for one of the company products, Confidettes. Thus, Confidettes information and statistics were mixed with abstract images, Beatle and guitar music, and bird sounds. Strange as it all sounds, sales did go up 11% so the salesmen must have been greatly inspired.

In December, Film Culture published an issue devoted to Expanded Cinema (#43, Winter 1966).

1967 During the "Angry Arts Against the War in Vietnam Week" (January 29-February 5), three performances of American Atrocities in Vietnam were given in New York. This underground play used films, slides, and sound effects in addition to the actors, much like what had been done in Epic Theatre. * Another antiwar play of the same year, the New Orleans Group's production of Ionesco's Victims of Duty, used slides, flim, and sound to continue the play after the actors had left. * +

In February, Barbara Ruben did Caterpiller Changes each night from the 20th through the 28th. She used multiple film projections in this work, employing different films and projection locations each night. On the night of the 21st, she used reel two of Jonas Mekas' THE BRIG on the left side of her screen, GUNS OF THE TREES in the center, and Storm de Hirsch's JONAS IN THE BRIG on the right. There was also a small square of THE BRIG's first reel moving all around the screen; this last effect was done by projecting the film from behind the screen into a small hand-held mirror and from that onto the screen. The films were all run without their soundtracks because sound was provided by taped Mothers of Invention music. Toward the end of the performance, all the projectors were cut to silent speed and music came from a live jazz band behind the screen. +

In February, the Contemporary Music Society commissioned Alwin Nikolais to do Somniloquy in the Guggenheim Museum aduitorium. The

40-minute work used a taped electronic score (which took 150 hours to compose, as did the choreography), two slide projectors (which used 200 slides hand-made by Nikolais, these could cover a projection area of 20-by-20 feet), four lekos spotlights, and twelve flashlights equipped with reostats and gelatin filter globes. A scrim was stretched across the stage to accomodate all the projections which were carefully coordinated to the dancers. +

Aldo Tambellini opened the Black Gate Theatre, New York's first theatre devoted solely to "electromedia" environments. Among the works that were presented there were Tambellini's own Black Zero.

During February, the Howard Wise Gallery presented "Lights in Orbit," a lumina show with works by USCO, Piak, Piene, and Thomas Wilfred.

Otto Piene presented his multimedia Happening, The Proliferation of the Sun, at the Black Gate Theatre in New York and Kunsthalle in Nuremberg. * +

In July, John Cage presented a multimedia Sabboth service at Temple Beth El in Spring Valley, New York. He was joined by fellow avant-garde artists in blending music, dance, lights, slides, film, audio tape, chanting, and readings from McLuhan into a worship experience. * +

Cage and Ronald Nameth did Musicircus, an 8-hour spectacle of sight and sound which utilized some 3,000 participants (including individual musicians, musical groups, orchestras, and audience members). This author has been unable to locate more information about this huge event.

The Joffery Ballet presented Astarte in New York's City Center, using dance, rock music, film, and kinetic scenery in a psychedelic, dramatic setting. * +

Jackie Cassen and Rudi Stern provided dazzling, abstract dissolve slides as a background for the Boston Opera Company's production of the Stravinsky opera, The Rake's Progress. *

USCO presented Yin/Yang at the Institute for Contemporary Art in Boston and the Riverside Museum in New York City. This 10-foot revolving balloon served as a projection area for films, slides, and oscilloscope light. +

Jerry Schultz produced the Off-Off-Broadway play A Study in Habitation, in which the actors, playing a family, lived on the stage; the audience paid one admission price and returned to the theatre as often as they wished.

John Whitney's children — John Jr., Michael, and Mark — staged several multiscreen shows in 1966 and 1967, particularly in conjunction with the concerts of the San Francisco psychedelic rock group, The Grateful Dead. One of their biggest audiences was the crowd at the September Monterrey Pop festival, where they did a 9-projector show on three screens.

On November 17th and 18th, Deborah Hay presented Group One at The School of Visual Arts in New York. This avant-garde dance work began with a 6-minute, black and white film of twenty-two people in five different movements in and out of a corner formed by white walls. The dance itself was done by eight people with white poles and five people in formal attire who moved around in various groupings. This work was virtually a crystalization of the progressive dance pieces of the 1960's. Kirby's Art of Time carries a complete account of the work.

In Boston on November 7, "An Evening of Beauty and Reverence" was held featuring Dr. Harvey Cox (author of The Secular City), Sister Mary Corita (Kent) who presented a show of slides, film and music, Fr. Daniel Berrigan who read his poems, and Judy Collins who sang folk songs. This event was a strange combination of a religious service (a communion meal of bread and wine was shared) and an entertainment piece (tickets were $3.50). Its influence on future worship services in the Boston area is subject to question.

The biggest event in 1967 for multiscreen works (and to some degree, multimedia works) was undoubtedly Expo 67, which was held in Montreal from April 28th through October 29th. The Fair attracted over fifty million visitors to its 1,000 acre site; many of its most popular mixed media productions (Labyrinthe, Diapolyekran, Kinoautomat) are described in the text. Other shows of interest at Expo 67 were the following: (1) Stan VanDerBeek's and Kenneth Knowlton's computer film, made with the BELFLEX language, called MAN AND HIS WORLD; (2) Francis Thompson's 6-screen film, WE ARE YOUNG, done for the Canadian Pacific-Cominco Pavilion; (3) Carolee Schneeman's Happening, Night Crawlers, which featured Ms. Schneeman and her partner cavorting on a foam-rubber-filled Volkswagen while Vietnam films were shown behind them; (4) Art Kane's 3-screen, 20-minute film, A TIME TO PLAY, done for the U. S. A. Pavilion; (5) Walt Disney's Circle Vision for the Telephone Pavilion, featuring a 360° presentation on nine screens — 23-by-273 feet total -- and twelve speakers of sound; (6) Christopher Chapman's film A PLACE TO STAND which was given at the Ontario Pavilion and featured multiple images on one 70mm frame of film; (7) Man: The Polar Regions, a theme pavilion where screens of film rotated around the audience; (8) Cine-Carousel in the Canadian Pavilion, where the audience rotated around five screens of Canadian history; (9) Svoboda's Polyvision, a 9 1/2 minute industrial show using slides, film, and sound; (10) Laterna Magika, with new acts in the same old format; (11) John Whitney Jr.'s untitled, 17 minute, 3-screen computer film that used mostly symmetrical patterns; (12) Canadian-Kodak's show which projected 8 minutes of slides on three water jets; (13) the Space Ride -- a 40 minute, 5-screen planetarium show -- in the Soviet Pavilion. All of these exhibits were visually impressive, but, except for the events described in the text, they were all revised editions of earlier discoveries.

1968 Your Own Thing, a rock-musical revision of Twelfth Night, opened on Broadway in late January, followed by Hair in late April. The importance of these plays is hard to indicate, since they do not seem innovative in light of Epic Theatre; surely projections (possibly even film) had been on the Broadway stage since the late 1920's. Still, projections and rock music were not generally considered to be parts of the American legitimate theatre until these two plays broke down some old walls. Hair especially made use of environmental action and sexual emphasis that had usually been confined to Off-Broadway productions. The international success of Hair did serve to awaken a large general audience to many aspects of Underground Theatre. *

In March, Stan VanDerBeek turned the Colgate University art building into a total projection environment for a day. * +

Otto Piene and Aldo Tambellini did Black Gate Cologne as a multimedia environment to be broadcast by WDR-TV in Cologne. Basically the television studio was transformed into a replica of Tambellini's Black Gate Theatre, with multiple images and sounds. Within this media immersion, the audience manuevered Piene's polyethelene tubing. Another version in Duesseldorf had projections on a mile-long section of tubing.

At California's College of Arts and Crafts at Oakland, Phillip Makana directed a production of King Lear which used rear projection film, actors on video tape, actors on closed circuit television, and live actors. + While this seems no different in form from Svoboda's Intoleranza (1965), it does seem to be one of the very few reported stage works that employed the video medium.

"The Confluence of Civilizations in the Americas" -- the official title given Hemisfair -- ran from April 6th through October 6th in San Antonio, attracting over six million visitors. The popularity of multiscreen events at Expo 67 was reason enough for more of these exhibits to be used at Hemisfair. Displays which have already been covered in the text were Laterna Magika, Kino Automat, and the multiscreen dome show at the Institute of Texan Cultures. Other events of interest were: Ford's 10 minute, 360° film about American culture and Ford products; General Electric's "GEnie," a version of Laterna Magika; Humble Oil Company's 5-screen film, MY NAME IS PAUL, about common life and American people; a multiscreen presentation of modern Japan; Kodak's Pavilion where projectors in hanging cubes threw film and slide images on other cubes; the U. S. A. Pavilion's huge American history hall where displays were presented with slides, photographs, print, sound, objects, and anything else that could be utilized to make the exhibit visually involving. One presentation that deserves special mention was the U. S. A. Confluence Theatre which seated 1,200 people in three separate viewing areas to watch Francis Thompson's program, US, about the good and bad in contemporary American life. The film had three general divisions, and at the start of the third section, the partitions between the audience groups rose up and away to allow all 1,200 viewers to see the 38-by-135 foot screen, the largest curvilinear screen in the world. This theatre was a joint project of Marmon and Mok Associates in San Antonio and Donald Desky Associates in New York; Thompson's film was government sponsored, and basically used the combined screens for Cinerama-like panoramas, although some triple imagery was incorporated into the documentary narrative.

The Fillmore East opened in March, thus completing the triad of major New York rock music-light show clubs. The other two, the Cheetah and The Electric Circus, had opened in 1966 and 1967 respectively. San Francisco's Fillmore West was a contemporary of the Cheetah since both opened in the spring of 1966.

Ron Globus, along with his brothers Richard and Stephen and technician John Bollinger, opened Museum of the Media on 14th Street in New York City. Their idea was to make multiscreen and sound shows that could be circulated to other museums. They have received little press coverage since the operation started; its present status is unknown to this author.

In May, the Seattle Opera House was the site of a psychedelic opera called Mantra, written by Peter Phillips and conducted by Henry Holt. * +

During the spring, a collection of presentations and performances known as Intermedia '68 toured college campuses in the East. Descriptions of the events make most of them sound superficial or unrealted to the subject of multimedia. Two exceptions were Carolee Schneeman's antiwar piece, Illinois Central Transposed, and the USCO exhibit, Fanflashtic. * +

During the summer, a series of avant-garde music presentations -- known as the "Electric Ear" series -- were presented at New York's Electric Circus. *

During August, Svoboda presented Carl Orff's opera Prometheus in Munich.

The setting was a huge staircase from which a metal trapezoid extended; Prometheus was chained to the trapezoid, which also served as a textured projection surface for large closed-circuit television images of the actor. At the climax of the play, the shaft was slowly withdrawn and bright lights reflected off its surface to blind the audience. When they recovered their vision, they saw only the empty staircase.

In October, the University of Michigan Episcopal student center conducted a multimedia worship service; this event was one of the few examples of this form of multimedia to be described in print. * +

M. Macourek's *Hra Na Zuzauku* (*The Suzanna Play*) opened at the Municipal Theatre in Frankfort on November 5th. Svoboda was the sceneographer for this play, which was directed by J. Pleskat and concerned an absurd story of a doll-like female of the modern consumer world. Diapolyekran cubes were used, forty-eight of them stacked in six rows of eight cubes. Each cube had eighty slides which were cued in the form of musical notes and "played" from a piano keyboard. Images in this satire were usually of mechanical and commercial objects.

During the winter, WGBH-TV of Boston conducted a series of experimental video works known as "The Medium is the Medium." Youngblood's *Expanded Cinema* contains fairly detailed accounts of many of these works, plus others done in 1967 and 1968 at KQED in San Francisco. Two works from the Boston series that seem especially geared for this report were an untitled work by Nam June Piak and *Black* by Aldo Tambellini. Paik's work combined twelve of his modified television sets (which produce beautiful patterns when the magnetic field of regular broadcasts are interrupted), two nude dancers, film of Richard Nixon and other personalities, and a recording of *Moonlight Sonata*. All of this made quite a collage of images on the video tape, as did Tambellini's work, which used 1,000 slides, seven 16mm projectors, and thirty Negro children. The visuals were projected onto the children, and three video cameras mixed different views of this projection environment onto the final video tape. Both of these works would appear to be multimedia, but a semantic question arises because the final work was the video tape for the screen, not the activity in the studio. For this reason, this author hesitates to call any television event multimedia unless the video projection is part of another work which employs other elements.

1969 During January, the Museum of Modern Art presented a show called "The Machine," which contained Rauschenberg's *Pantomime* and *Oracle*, plus other art/technology works from E. A. T.

In February, the "Crosstalk" festival was held in Tokyo, with Events, Theatre Pieces, and multiple projection environments by Japanese and American artists, including VanDerBeek. *

In 1965 Jud Yalkut had become resident filmmaker for USCO; in March of 1969, at Oneonta, New York, he presented Dream Reel on Yukihisa Isobe's 50-foot diameter, floating, parachute screen. The presentation was divided into three sections: (1) Piakpieces, featured films of video distortions done by Yalkat and Piak; this section ran 15 minutes with five 16mm projectors(one with sound on film), four Carousel slide projectors, and a stereo tape of Takehisa Kosugi's Dharma No. 8. (2) Festival Mix used three 16mm projectors four slide projectors, and a four-track stereo tape called Festival Mix Tape by Andy Joseph and Jeni Engel. This section is a remixed replay of an eleven-channel presentation, which was originally given at the 1968 University of Cincinnati Spring Arts Festival. Images and sounds came from all aspects of the avant-garde world. (3) Mix-manifestations utilized five 16mm projectors, two 8mm projectors, four slide projectors, and two four-track stereo tape systems. The images and sounds were a collage of widely diverse realistic and abstract elements. +

Svoboda's production of L. J. Werle's The Journey opened at the State Opera in Hamburg on March 2nd. This play concerned Nazi occupation of Bohemia and tragedies which resulted from this occupation. Stationary rear projection cubes were used in this presentation, with each cube using four slide projectors to show just one large, composite image. This projection method was used to preserve maximum image brightness and clarity in each large slide image.

On March 23rd, Svoboda's production of The Soldiers opened at the State Opera in Munich; this play used fifteen projection boxes. *

NEA's Department of Audio Visual Instruction held a convention in Portland, Oregon, at which they had their first Multimage Festival; these shows (mostly done by U. S. C. students) were well received by the convention delegates.

In March or early April, Richard Glendening, a faculty member at Harry H. Gunn Senior High in Palo Alto, California, helped students coordinate a multimedia presentation on Man and Power; this show used films, slides, overhead projections, audio tape and dancers. * +

In May, the New York Howard Wise Gallery presented "Television as a Creative Medium," the first show of television and video tape as art. The highlight of the exhibition was Nam June Piak's TV Bra for Living Sculpture, in which Charlotte Moorman (nude except for two tiny Sony television sets on her breasts) played a cello which interferred with the images of Dick Cavett on her breast sets.

Milton Cohen, of the ONCE group in Ann Arbor, presented Centers: A Ritual of Alignments in his Ann Arbor Space Theatre. This work, similar to many of Cohen's pieces, used film, slides, and strobe projectors to throw abstract circular images on the walls of the room and an eight revolving triangular screens. +

On the 16th of May, Cage presented his 5-hour marathon of sights and sounds, HPSCHD, at the University of Illinois. * +

Rudi Stern and John Reilly opened the Global Village -- a video environment for experimental works -- in New York City in September. * +

1970 Expo 70 was held in Osaka from March 15-September 13. This was the first World's Fair to be held in Asia, and it drew the record attendence for World's Fairs as well (over sixty-four million visitors). Among the events of interest to this report were the following: the Fuji Pavilion had viewers stand on a moving, circular platform that contained twenty-eight slide projectors (only the screen was stationary in this show); another feature in the Fuji Pavilion was a 210mm film with multiple images on the single frame and sound from 126 speakers; the E. A. T. Pavilion contained the world's largest sperical mirror and a floating water cloud; and the Japanese industrial firm of Midori-Kai sponsored an environmental projection display called "Astrorama." This last exhibit was quite large in scale -- 25 meters high and 30 meters wide -- so it could hold 1,000 viewers at a time. The 20 minute show concerned a foetus awaiting birth; however, the foetus was an embodiment of man's progress from Prehistoric time to the present, so a review of the highpoints of civilization (especially art) covered the environment. The show began in the dark with only the sound of the mother's heartbeat, and ended with a bud at the top of the dome, which blossomed down all of the walls.

In addition to the Multiscreen Festival held at the annual convention of DAVI during the spring in Detroit, there were also examples of Environmental learning areas. Everett McDonald and Harry Dinlocker presented a room with projection surfaces on all sides of the learning environment; Creative Center Incorporated showed a plastic, inflatable room with rubber floors, polyethelene tubular devices that contain seven projection areas, twenty-one slide projectors, an air compressor to keep the room up, and a multitrack recorder/programmer to provide sound and operate the projectors. Construction costs of the latter room are between $3,500 and $4,000 and the programmer is an extra $2,500.

The mammoth exhibit of the history of Caracas, "Imagen de Caracas," was held in that Venezuelan city. Thousands of slides, films, and photographs were contained in the huge building. * +

1971 In April, Svoboda presented Paul Dessau's opera Lancelot. Many front and rear projections were shown on an ugly machine which also held the actors.

Also in April, Svoboda's exhibit Noricama was presented in the Nuremberg Castle. * +

Again in April, Ken Burke conducted a study in Austin, Texas, concerning the effectiveness of "multimedia" presentations in worship services. *

During the summer, Eric Salzman and his wife toured South America presenting multimedia shows with film, slides, audio tape, live musicians, and live performers recruited at each stop. Mostly they were using Salzman's Feedback, which contained film and slides from VanDerBeek.

From October 31st through November 13th, Memphis State University's Drama Department presented a highly successful multimedia version of the rock opera Tommy. * +

1972 In January, the Experiment Theatre opened in Austin, Texas, as the first attempt to present multimedia in the context of dramatic narrative. Reaction to the first show was not good and the future of the theatre is currently unknown. * +

In February, the Brooklyn Chelsea Theatre Center began a production of Kaddish, adapted by Robert Kalfin from a poem by Allan Ginsberg eulogizing his mother. This tremendously powerful work about Naomi Ginsberg's gradual madness and death is made even more powerful with the addition of video tape images prepared by Video Free America.

Also in February, a group of twenty-six women artists from the California Institute of the Arts turned an existing house in Los Angeles into the Environment "Womanhosue." Through the arrangement of mannequin figures and household objects, the artists dramatized the dilemma of the contemporary woman locked in her social role.*

In April, Threshold opened at the University of Texas at Austin for a week's run. This environmental slide presentation, which employs a dramatic narrative, was prepared by a class of graduate students under the direction of Dr. Richard Byrne and Dr. Robert Brooks.*

As noted in the text, the number of events considered significant by this author rise greatly in the mid-1960's and taper off just as quickly in the late 1960's and early 1970's. This does not indicate that less is being produced currently (just the opposite is the case where production is concerned); rather, it shows that fewer significant works are now being produced. Much of the vast flood of "multimedia" that now swamps American art, education, and business is merely a redundant recombination of the events listed on these pages.

Appendix III

Technological Developments in Various Electronic Media

1646 Magic Latern ("Magia Cataprica") was supposedly developed by the Jesuit priest Anthanasius Kircher and published by him in Ars Magna Lucis et Umbrae. This device was basically a box with a candle and a convex lens; the candlelight was reflected through both the lens and a hand-painted slide. Thus, pictorial images could be projected in large scale. Kenneth MacGowan claims that the Magic Latern was not mentioned until the 1671 edition of Kircher's book; further, he states that what is described in 1646 editions is actually an opaque projector. MacGowan claims that the Dutch scientist Christian Huygens made the first true Magic Latern in 1655 or 1656.

1727 Johann Heinrich Schulze discovered the photographic principle that silver nitrate crystals darken when exposed to light. By placing stencils on silver nitrate-filled flasks, he was able to produce negative, photographic images. His process is not considered to be true photography, since he was not able to preserve the image.

1734 On December 21, in Paris, Pere Louis Bertand Castel displayed the first color organ. His instrument was a modified 5-octave harpsichord with colored paper strips connected to the keys; these strips were raised in front of a black screen as the instrument was played. It was called the Clevessin Oculaire.

1824 On December 24, Peter Mark Roget (of Thesarus fame) presented his treatise on "The Persistance of Vision with Regard to Moving Objects" to the Royal Society in London. This principle of vision-persistance later led to motion pictures.

1826 Joseph Nicephore Niepce made the world's first true photograph with a camera obscura on a pewter plate coated with a mixture of asphalt (bitumen of Judea) and lavender oil. This photograph of Niepce's courtyard is now owned by the Gernsheim Collection at the University of Texas at Austin. Accounts that credit Niepce with his invention at an earlier date are probably referring to the lithograph plates he produced by similar methods possibly as early as 1822.

1829 Joseph Antoine Ferdinand Plateau of Brussels published his first theories on the persistance of vision, specifically noting that sixteen images per second are enough to produce the illusion of motion from still images.

1831 Sir David Brewster (London) described the principle of anamorphic lenses in his "Treatise on Optics."

1832 Plateau illustrated his persistance of vision theory with the Phenakistiscope, a rotating disk that flashed images in a mirror. A similar device, the Stroboscope, was also made that year by Simon Ritter von Stampfer.

1833 C. Wheatstone developed the Stereoscope, a binocular-like viewing device that showed a separate, identical picture to each eye thereby giving the illusion of depth to a flat picture.

1834 William George Horner (of Bristol, England) invented the Zootrope (Zoetrope) which was popularly called the "wheel of life." This rotating disk had images around the inner surface and slits in the top, so that a viewer looking through the slits at the rotating images appeared to see motion.

1839 On January 7, Louis Daguerre (who had formed a partnership with Niepce before the latter's death in 1833) announced the invention of Daguerreotypes to the French Academy. Niepce had called the original process heliogravure, but Daguerre sufficiently altered the method enough to warrant a name change. Daguerreotypes were made with camera obscuras on silver iodide-coated copper plates, developed with mercury vapor and fixed with sodium thiosulfate (hypo).

On January 25, Henry Fox Talbot presented his discovery of a paper-negative photographic process to the Royal Institution of Great Britian. Unlike the one-original principle of the Daguerreotype, Fox's paper negative allowed many prints to be made. Still, Daguerre was given the official historical recognition for the invention of photography, a distinction Talbot coveted. The actual word "photography" was first used by Sir John Herschel to describe Talbot's process; Talbot referred to it as calotype.

In June, Hippolyte Bayard exhibited photographs in the rue des Jeuneurs in Paris.

The French Academy of Science recognized Daguerre as the inventor of photography on August 19, 1839.

1840 H. L. Child used alternating bright and dim lights with sliding Magic Lantern pictures to produce a "dissolve" effect. This was not really developed as a motion picture principle, but has recently been returned as an effect with 35mm slides. (crude as it may seem, the Magic Lantern was the forerunner of modern slide, opaque, and overhead projectors.)

1850 W. and F. Langenheim of Philadelphia developed the photographic lantern slide, the forerunner of modern 35mm slides.

1853 The Austrian military officer Baron Franz von Uchatius combined the principles of the Magic Lantern and the Phenakistiscope to invent a projector that could show a moving series of hand-produced images.

1860 Coleman Sellers of Philadelphia used photographs (of his sons driving nails) in a Zootrope.

1870 On February 5, Henry Renno Heyl showed his Phasmatrope (photographs in a projected Zootrope) to a crowd of 1,600 at the Philadelphia Academy of Music. This prototype of motion pictures used six poses of a waltzing couple in a cycle of three repetitions.

A photographer named Dragon invented microfilm in Paris, but his discovery went largely unnoticed until 1937.

1871 Dr. Richard Maddox developed the dry-plate photographic process to reduce the inherent clumsiness of the wet-plate system (adopted about 1850 because of the relatively fast exposures allowed by the cellulose nitrate emulsion used on glass plates). Gelatin emulsion was the answer because it retained its speed when dry.

1873 L. May discovered the photoconductive properties of the element selenium; this information was published in London by Willoughby Smith, and eventually led to television.

1874 In Dresden, Germany, Hugo Bahrs created a mechanically-projected moving cloud effect for theatre productions. This was the beginning of sophisticated scenery projection for the stage.

On December 9, Pierre Jules Cesar Janssen photographed Venus passing in front of the sun with a photographic pistol that took forty-eight shots in series around the edge of a circular negative.

1875 George Carey of Boston designed a television transmission system that would have used a separate circuit for each picture element transmitted.

1876 Caspar W. Briggs made an animated system of Magic Lantern slides using a Geneva movement intermittent mechanism and a revolving shutter. This could be considered a development in the evolution of the animated film.

1877 Emil Reynaud, in Paris, perfected the Praxinoscope-- a Zootrope with mirrors around a column in the middle of the drum. By watching the mirrors instead of the slits, a viewer saw only smooth action instead of the miniscule interruption caused by the slits.

Eadweard Muybridge made his famous series of photos of a galloping horse at the request of California railroad tycoon Leland Stanford.

The twelve photos taken by twelve cameras proved that a horse does have all feet off the ground at one point during the gallop; action series such as these spurred the progress toward true motion pictures.

Thomas A. Edison invented the first successful phonograph, with the sound recorded on a tin-foil-wrapped cylinder.

1879 On October 21, Thomas Edison perfected the incandescent light blub; the importance of this invention to modern projection of moving and still images is truly invaluable.

1880 Muybridge is reported to have done Phasmatrope-type projections of his action series on May 4 for the San Francisco Art Association.

W. E. Sawyer in the United States and Maurice Leblac in France made proposals for television scanning systems.

1882 Etienne Jules Marey made a rifle-shaped camera that took twelve pictures in rapid succession around the edge of a negative disk.

1884 Paul Nipkow (Germany) developed a mechanical scanning-disk picture transmission system using selenium cells. An image was transmitted by means of a beam of light passing through a continuously-moving disk; the signal was passed by way of selenium cells and circuits to a receiver where the light passed through another scanner and formed an image because of persistence of vision. In crude form, this was the first television system.

1885 Chichester A. Bell and Charles S. Tainter received a patent for a phonographic wax cylinder. In 1887 they began selling graphophones which used these wax cylinders.

1886 In Germany, Heinrich Hertz proved the existence of radio waves.

1887 In May, the New Jersey Episcopal pastor Hannibal Williston Goodwin applied for a patent on celluloid as an emulsion base for roll film. However, the patent was not granted until September 1898, by which time the Eastman Kodak Company already had a patent for the same type of film. Goodwin died soon after being granted his patent, but his company sued Kodak for patent infringement. By the first decade of the 20th century, the courts finally ruled in favor of the Goodwin organization (by then called The Ansco Film Company) and forced Kodak to pay $5 million in damages.

1888 W. Hallwacks of Germany began research into making making a photoelectric cell; later perfection of this device made possible the development of electronic television transmission.

Marey perfected a paper film that could take up to forty pictures in rapid-fire order.

Edison developed the first true motion picture camera; it shot forty-eight frames per second on Eastman's paper-backed, gelatin-emulsion film.

1889 In April, the Eastman Kodak Company applied for a patent on celluloid roll film. They began marketing this film in August, and the patent was granted in December -- despite Goodwin's patent application on the same type of film in 1887. Goodwin was probably ignored because he lacked the necessary funds to complete Patent Office-required tests.

On October 6, Edison made the first true motion picture viewer in his New Jersey laboratory, using a device he called the Kinetoscope. This 4-foot high, 2-foot wide, single-person viewer showed his assistant, W. Laurie Dickson, sneezing. The 50-foot continuous film loop ran at forty-eight frames per second, so it only took 13 seconds for the complete film to run. Edison's early Kinetoscope films were intended to be used with his phonograph, so the sound film (in a very crude form) also dates back to this time. Later Edison films were reduced in speed to sixteen frames per second, which became the standard silent speed -- along with the Edison 35mm frame size which also became standard. MacGowan casts doubts on this early date, but nothing conclusive has been proved.

1890 Ernst Abbe and Carl Zeiss invented the anamorphic lens. They were able to get a squeeze ratio of 2.5 to 1, so that an extra-wide image could be squeezed onto an ordinary 35mm frame, and then expanded to full width by means of another anamorphic lens on the projector.

1891 On August 24, Edison applied for a patent on his Kinetoscope; the patent was granted on March 14, 1893, but Edison thought so little of the potential of his invention that he failed to pay the extra $150 to cover an international patent.

1893 Muybridge's Zoopraxiscope was shown at the Zoopraxographical Hall of the Chicago Fair. The enthusiasm with which this projected series of animals in motion (shot with a battery of still cameras rather than with a true motion picture camera) was received indicated that motion pictures would be a successful commercial property.

1894 The first Kinetoscope parlor was opened on April 14 at 1155 Broadway in New York City by Andrew Holland; ten viewers connected to phonographs were used in this first parlor.

Emile Berliner began marketing the Gramophone, which used disk records pressed from a master zinc disk.

1895 On February 13, Auguste and Louis Lumiere patented the Cinematographe, a combination camera, printer, and projector.

On March 22, the Lumiere brothers showed their first film, LA SARTIE DES OUVRIES DE L'USINE LUMIERE (WORKERS LEAVING THE LUMIERE FACTORY) to the Societe d'Encouragment pour L'Industrie Nationale at the rue de Rennes (44) in Paris.

Alexander Wallace Rimington gave a color organ recital on June 6 in St. James Hall, London, using an instrument connected to fourteen arc lights. Rimington's color organ was part of a small symphony's performance of Wagner's "Rienzi Overture." Critic reaction to the performance was unfavorable since the projected colors came in flickering staccato patterns.

Thomas Armat invented the Vitascope, the first American motion picture projector (the Kinetoscope was a viewer, incapable of external projection) in June. In September Armat exhibited the projector at the Atlanta Cotton States Festival. Edison was intially opposed to projection of motion pictures, but his financial backers finally convinced him to join forces with Armat.

On November 1, the German brothers Max and Emil Skladanowsky gave their first public showing of their projection device, the Biograph, at the Berlin Wintergarden Variety Show.

The Lumieres gave their first public showing on December 28 at the Grande Cafe, Boulevard des Capuchines, Paris.

Guglielmo Marconi made the first wireless transmission of radio signals (100 feet). In 1896 he acquired a patent on his accomplishment.

In Denmark, Valdemar Poulson succeeded in recording an electrical signal on magnetic steel wire; he applied for a Danish patent on December 1, 1898, and showed his invention at the 1900 Paris Exhibition.

1896 On April 13, Edison showed films with a Vitascope projector at Koster and Bial's Music Hall in New York City. By this time, however, Edison faced stiff competition from the Lumieres and others.

1897 In Germany, K. F. Braun developed a cathode-ray tube and florescent screen. These devices were vital to the final version of a totally electronic television system.

Beginning in 1897 and continuing through 1901, Marconi made many "first" wireless transmissions from Needles, on the Isle of Wight. All of these were important for radio, but Marconi's transmissions were actually wireless telegraphy. Among his "firsts" were the bridging of the English Channel with wireless transmission in 1899 and the first 200-mile wireless transmission in 1901.

C. Grivolas used stereoscopic images of complimentary colors to make the first 3-D film.

1900 At roughly the turn of the century, Adolph Linnebach improved upon the incandescent-lamp stage projector to develop the type of spotlight that still bears his name. Slides could also be used with this projector (like an ultra-bright Magic Lantern) to provide background scenery.

1906 Thaddeus Cahill, in Mount Holyoke, Massachusetts, invented the Telharmonium; this was the first machine which could produce sounds electronically. This forerunner of modern synthesizers used rotary generators and telephone receivers to turn electronic impulses into sound. The machine was described as "complex, bulky, and impractical."

Dr. Lee DeForest invented the vacuum tube, which was the basic discovery for all devices which needed amplification of electronic signals; devices such as radio, television, and sound amplification systems for audio tapes and phonographs would have been lost without the vacuum tube. Besides amplification, radio also used the vacuum tube as a compact, efficient source for sending and receiving signals.

R. A. Fessenden became the first person to effectively broadcast music and speech as a true radio signal; his transmission was from Blant Rock, Massachusetts.

1907 The Russian, Boris Rossing, transmitted some crude geometric images on a cathode-ray screen, as television continued to evolve.

1911 In London, A. A. Campbell Swenton made an advanced proposal that cathode-ray tubes should be used in both the receiver and the camera in television transmission, rather than the mechanical scanning device still used for transmission.

1913 J. Elster and H. Geital (in Germany) produced a fast photoelectric cell, enabling rapid transmission of television scanning signals so more coherent pictures could be seen on the cathode-ray receiver.

1920 Filmstrips and filmstrip projectors were developed by John Bray of Bray Pictures Corporation. Beginning in 1931, these filmstrips were accompanied by programmed phonograph soundtracks.

1921 WBZ in Springfield, Massachusetts, received the first regular radio broadcasting license on September 15. Other stations, notably KDKA in Pittsburg, had broadcast on some basis for several years before WBZ.

Thomas Wilfred developed the first successful, soundless color organ, known as the Clavilux.

1922 Wifred's first public Clavilux concert was given at New York City's Neighborhood Playhouse on January 20th.

1923 Technicolor was perfected by Herbert Kalmus, who had worked on the project since 1918. This process replaced older methods of producing color films -- hand-tinted frames, colored film stock, and crude two- or three-color systems -- which had been used since the turn of the century.

Lee DeForest introduced a method for photographing the soundtrack directly onto the film. He used his Phonofilm process to produce shorts of Eddie Cantor, Phil Baker, and Webber and Fields. For the time being, his idea was rejected in favor of the Warner Brothers Vitaphone process, which used sound on large records (amplified by the DeForest vacuum tube).

V. K. Zworykin of Russia patented the iconoscope tube for use in television cameras.

1926 The first true color commercial film, THE BLACK PIRATE starring Douglas Fairbanks, was made, using the Technicolor process.

The National Broadcasting Company (NBC) organized the first national radio network; twenty-four stations were located from coast to coast so that the same program could be simultaneously broadcast across the nation.

J. L. Baird did the first true television broadcast; this demonstration in London used the mechanical scanning disk method to transmit 30-line pictures ten times per second. Limited television broadcasting continued in England after this great accomplishment.

1927 The first true television broadcast in the U. S. A. was made by the Bell Telephone Laboratories between New York and Washington, D. C. Herbert Hoover (then the Secretary of Commerce) appeared on this broadcast.

Synchronized sound came to the commercial film in both the Warner Brothers and the Fox studios. Warner Brothers used the Vitaphone process of large records (from 13 to 17 inches) to give musical accompaniment to DON JUAN -- with John Barrymore -- in August and a voice to Al Jolson in THE JAZZ SINGER, which opened in New York City on October 6th. Fox used the German Tri-Ergon system (with assistance from Lee DeForest and Theodore Case) to produce WHAT PRICE GLORY with the soundtrack directly on the film.

The first U. S. patent for magnetic tape recording was awarded to J. A. O'Neill.

The first electronically-amplified version of a traditional instrument -- the Superpiano -- was introduced. Soon almost all other musical instruments had electronically-amplified cousins.

The first national radio broadcast (NBC) was made; it was the live coverage of a football game.

1928 Fritz Pfleumer received a German patent for audio tape; the tape and the necessary tape recorders were highly developed by the Nazis for military use during World War II.

In England, Baird made the first practical application of color television, again using the mechanical disk scanner.

1930 The first efficient sound-on-film projector was perfected by R. P. May of RCA.

1932 RCA made the first totally electronic television transmission, using cathode-ray and iconoscope tubes; the image consisted of 120 lines for each transmission.

3-D films made with polarized light became commercially feasible due to the Polaroid lenses developed by Edward H. Land. Polarized films were first shown by Chrysler Corporation at the 1939 New York World's Fair.

1933 All-electronic television cameras and receivers were developed for commercial use.

1936 High-definition television service was established in London; 405 lines were transmitted once every second.

1937 Microfilm was reintroduced at the Paris Exhibition; the University of Chicago and the U. S. Department of Agriculture were the pioneer developers of the material in this country.

1938 E. H. Armstrong perfected FM radio.

1941 The FCC authorized commercial television to begin in America beginning on July 1st. The first sanctioned commercial television station was WNBT in New York City, which received its license on June 17th.

1946 Frank G. Back introduced the "Zoomar lens," which allowed one camera lens to incorporate a range from wide angle to telephoto; this device is virtually a standard feature on modern television and Super 8 cameras, and is enjoying increasing use in still photography.

1948 The LP (long-playing) record was marketed, allowing a 12-inch record to be played at a speed of 33 1/3 revolutions per minute rather than the old rate of 78 rpms. Microgrooves on the record made the big difference.

1953 In the U. S., the National Television Systems committee developed a color television receiving system that was compatible with existing black and white receivers. Color television was then marketed in the U. S., beginning in 1954.

The first Cinemascope (wide-screen, using anamorphic lenses) feature, THE ROBE, was released in September by 20th Century Fox. Cinemascope was a successful move to undermine the popular novelty of Cinerama (which had been enjoying commercial success since its revival in 1952). Cinemascope used the anamorphic lens that had been displayed in Paris in 1927 by Henri Chretien. As Cinemascope proved to be a sound, economic move for theatre owners who did not want to bear the cost of conversion to Cinerama, other variations on the anamorphic lens were also invented. By the mid-1950's, a return was made to wider frames (65mm and 70mm) too.

1955 The first true electornic music synthesizer was made for the RCA Laboratories in Princeton, New Jersey, by Harry Oslon and Herbert Belar.

1956 Ampex introduced video tape recording on a segment of Art Linkletter's House Party. This major advancement for the television industry had been developed originally in 1951 by the Bing Crosby Enterprises, then sold to Ampex. Color video tape was then perfected by Ampex and RCA.

1963 M. V. Mathews and associates at the Bell Telephone Laboratories used an IBM 7094 computer to snythesize electronic sounds.

Appendix V

Letters

The letters on the following pages were received by the author during the course of his research. They are reproduced exactly as they were received.

VILLE DE MONTRÉAL
CITY OF MONTRÉAL
CANADA

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AIRMAIL

December 10, 1971.

Mr. Ken Burke,
1200 San Antonio St., Apt. C,
Austin, Texas 78701,
U.S.A.

Dear Mr. Burke:

Your query to "Information Office - Man and His World" has been referred to my attention and I will endeavour to supply you with a list of information sources for your thesis on electronic multi-media.

More information on "We are Young" is probably available through the Public Relations Department, Canadian Pacific, Windsor Station, Montréal. Labyrinth was a project of the National Film Board of Canada. You should contact its Information Director, at 3155 Côte de Liesse Road, Montréal.

The best source for the multi-screen efforts by the Czechs, other than writing to the Czech Government, Commerce Department, in Prague, would be to contact the Czech Consul-General in Montréal, 1305 Pine Avenue West, or perhaps the Czech Embassy in Washington.

One part of the Labyrinth film was shown at Man and His World (the permanent successor to Expo 67) last Summer, and the Czech producer Raduz Cincera has a new split-screen film on display as commissioned by the City of Montréal (see enclosed release).

...

The best sources for the Brussels and Osaka fairs is probably the Bureau International des Expositions, 56 avenue Victor Hugo, Paris 8e, France, or possibly the office of Patrick Reid, director, Canadian Exhibition Commission, 2487 Kaladar St., Ottawa, Canada. I'm not familiar with the Moscow Fair, which was not in the same category as the others, but it was presumeably a commercial fair hence you should contact their embassy in Washington or write directly to the Commerce Department in Moscow.

Hoping this information will prove useful and wishing you the best of luck, I am,

Yours very truly,

Paul Leduc

PL/nb

Encl.: release

Communiqué
News Release

de/from

pour publication
for release

872-6010

THE SOUND STORY

by

Donald Bell

The brilliant Czech producer Raduz Cincera, whose inventive audience-participation film Kine-automat was one of the highlights of Expo 67, has created a new film-and - sound experience that is proving to be one of the major attractions at Man and His World in 1971.

A multi-screen presentation, "The Sound Story" is shown continuously at the former CP-Cominco Theatre on Ile Notre Dame.

The 20 - minute bilingual, film, created especially for Man and His World, sets out to prove audio-visually and in a humorous way that the same sounds, or the same words can have completely different nuances of meaning according to the situation in which they are used.

Cincera uses four screens, arranged in a T-pattern, and stereo sound to conduct his experiment.

In the beginning, the four screens show only pastel-colored squares. The accompanying sound is a rhythmic clapping of hands. Later, the first screen shows two small children clapping hands.

2...

2...

Gradually, the other screens show different pictures with the same clap-clap accompaniment: a lady having her back massaged by a masseur, an old lady slapping a piece of dough about on a board, and a couple of teenage boys slapping each other angrily - but in rhythm in a doorway.

The experiment is then continued in the grammar of dialogue. A girlish voice is heard uttering--

"No...no...d'accord"

It is obvious that she can't make up her mind. But about what? The screens offer several pictorial explanations: on one screen, we see the girl in front of a jeweller's showcase, trying to decide what to buy; on another, she is in a police station facing a line-up of wanted men. "No...No..." she says. Then -- "Yes, as he offers more and more money.

On the fourth screen, the same couple is seated on a couch and the young man is leaning towards her. Her words are the same "No... No..." the a surrendering "D'accord".

Cincera carries the idea further with a comical story about people in four rooms in a boarding house with paper-thin walls: a confused gangster pair named Blimp and Biff on the "lam" from the police, a married woman having an escapade with her lover, an awkward young man fleeing from his dommeeting mother, and the lady owner of the boarding house in the last room typing a letter.

They all react differently to the sounds that intrude. A rat-a-tat-tat can be machine-gun or a typewriter. A high point of farce is reached in a chase sequence triggered by mistaken sound-identities.

3...

But in the end, everything works out to everyone's satisfaction. In spite of all the humor, Cincera points out that this multi-screen experiment is a serious examination of the relativity of feelings, words and values as interpreted by different generations and different human beings.

Though there is no stop-start audience participation as in Kineautomat, the style is reminiscent of that earlier film which played before packed houses at the Czechoslovak Pavilion at Expo 67... and it is as lively and entertaining.

Filmed mostly in Montreal and Prague, "The Sound Story" was written and directed by Cincera. Co-producer was Jan Rohec, who also worked on Kineautomat.

Admission is 50 cents for adults, 25 cents for youths. Children under eight may enter free.

June 1971

Intermedia Systems Corporation

711 Massachusetts Avenue
Cambridge, Massachusetts 02139
617 868-9880

February 15, 1972

Mr. Ken Burke
1200 San Antonio Apt. C
Austin, Texas 78701

Dear Ken Burke:

Thanks for your letter of February 4th. I am sorry you weren't able to get in touch earlier but I will try my best to get you the information which you require. Let me suggest this. If you have any further questions after reading the enclosed material, write me a list of very specific questions which I can answer either by letter or if you have a tape recorder available, I would dictate it into either a cassette or reel-to-reel format, whichever you might prefer. Please thank Dr. Byrne for thinking of us in the context of your thesis and when you next see him, tell him that I and his friend Mickey Sills have been seeing quite a bit of each other here in Cambridge.

A book which you really should read is Kostalanetz' *The Theatre of Mixed Means*, Dial Press, 1968. It has chapters on a lot of people in the world you're writing about, including a chapter on USCO. Some of this material is covered in another article by Kostalanetz in *Harpers*, which is among the material enclosed. Also valuable is the enclosed article from *Tulane Drama Review*. You might take a look at that whole issue which includes something by Vander Beek and other people. To get in touch with Aldo Tambelleni and Don Snyder, I'd suggest you inquire from Mrs. Madeleine Ferris, Creative Artist Program, 250 West 57th Street, New York City. They are part of the New York State Council on the Arts and should be able to get the addresses for you.

Actually the apogee of our USCO work was the show at the Riverside Museum which is the focus of the *Life Magazine* article on Psychedelic Art dated October 3, 1966. Psychedelic art was not our terminology, although it arose from a series of performances, "The Psychedelic Theatre" presented by USCO and the Castalia Foundation which were D-. Timothy Leary's first ventures into show business.

The more I think about this information matrix, the more I would prefer to talk it into tape - perhaps in association with Michael

Callahan, who worked with me for so many years all through USCO and is presently a fellow director of Intermedia. So if you'll shoot a note back saying what speed you'd like it - reel-to-reel or cassette - we'll do that and we will also get together a performance, or perhaps even a more general USCO chronology for you. On May 4th of this year we are presenting a lecture at the Carpenter Center, Harvard University, which if we can get it together, will be a wrap-up of our work of the past more than a decade.

With best wishes for your thesis.

Sincerely,

Gerd Stern
President

GS/dj
Encs.

Intermedia Systems Corporation

711 Massachusetts Avenue
Cambridge, Massachusetts 02139
617 868-9880

DEALER SOFTWARE
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Newsweek
November 30, 1970

Media in the Market

Seven years ago Gerd Stern, one of the founders of USCO—the "Us Company," pioneers in mixed media—staged an extravaganza at the San Francisco Museum of Art that plugged 64 live performers plus spectators into a barrage of simultaneous electronic messages sent to the eye and the ear through television, telephone, audio tape, slide projections and more. On the seventh anniversary of that spectacular day, Stern recently performed in another way, before conservatively dressed stockholders in a company he partly owns, Intermedia Systems of Cambridge, Mass.

It was probably the world's first multimedia stockholders' meeting but, compared with USCO's previous electronic free-for-alls, it was tame stuff: three screens, slides and gentle rock music—nothing more. Stern himself, once addicted to denims and sandals, is natty and neat. "I didn't wear a tie for fifteen years before Intermedia," he says. When it came time to talk, he did not shout the old USCO message, WE ARE ALL ONE; he talked about new products, expanding markets, invested capital.

The fact is that USCO has gone public. Its core members—Stern, engineer Michael Callahan, artist Robert Dacey and psychologist Gunther Weil—are now attempting to market on a broad scale the multimedia avant-garde techniques that once blitzed esoteric lofts, galleries and museums. In this sense, they are pioneering again, making a move with wide sociological implications. USCO's associates in Intermedia are all solid businessmen. One of them is Ruben Gorewitz, a wizard at the financial organization of the avant-garde, who specializes in saving the fiscal lives of preoccupied geniuses such as Martha Graham, John Cage and Merce Cunningham. Another, Dr. George Litwin, left a full-time post at the Harvard Business School shortly after he met Stern. "I could tell right away that USCO had a fantastic ability to create intense experiences through multimedia," he says, "and I was sure we could market those insights to both education and industry."

Award: After a year of haggling with the Securities and Exchange Commission in Washington (over the precise meaning of a term like "multimedia experience"), Intersystems went over-the-counter in November 1969 and sold $600,000 worth of stock. Installed in an old theater building in the heart of Cambridge, Intersystems is now selling both its products (a line of low-cost, audio-visual programing units) and itself. "For a thousand dollars," Stern tells his investors, "we will make a media survey of a plant or a school or a church and recommend what to program as well as how."

The investors are cautiously optimistic. They share Litwin's belief that the future belongs to communication and education that hits the senses as well as the mind. They are encouraged by the award of an important contract to Intermedia by the New England Power Co.—to consult on a multimedia showcase for the public at its new power plant near Beaver Dam, in Massachusetts. Only the USCO group has reservations. "There was less hassle in the art world," one of them says, "or even in building discothèques."

Stern himself has no regrets. "The galleries and museums never supported us the way New England Power does. That's the major project of my life. I'm going to visualize the country's electric network in that display, showing how it brings us all together, which is what I've been trying to do from the start." Stern is attempting to realize one of the strongest directions in contemporary art—away from the cloistered gallery and the precious object toward strategies that directly affect the world. "I don't care whether I'm called an 'artist' or not," he says. "All I care about is the work, creating an experiential flow of information, making a physical impact."

—D. D.

Some Extracts from "Psychedelic Art"
Cover Story LIFE October 3, 1966

... A recent exhibition at the Riverside Museum in New York City, put on by a pioneering group called USCO, indicated that a lot of people are eager to let psychedelic art turn them on. Many of the thousands who flocked to the show brought along their lunch so that they could settle in until closing time ... A wide variety of light systems - neon, strobes, oscilloscopes - is incorporated into the art made by USCO, a group of artists, poets, film makers, engineers and weavers who live and work communally. In their New York show, a plastic "eye" aflame with interior lights seemed to stare hypnotically at viewers. As some of the lights turned off and on, they activated gels suspended within the "eye". The resultant slow movement tended to diminish the viewer's sense of time ... USCO's use of light is often symbolic. In a nine-foot-high painting stands a male figure representing Shiva, the Hindu god of creation, whose out-flowing energy is symbolized by the central, pulsating light from which painted lines radiate. Superimposed upon the Shiva is a seated Buddha who is on an "inward journey," his "divine light" immersed in the center of his being. At the edges of the canvas, red lights throb in the steady rhythm of a beating heart. These luminous fluctuations, allied with the symbolic imagery, are intended to induce contemplation... The spectators below are immersed in a contemplative, mystical environment created by USCO at the Riverside Museum. Sitting around an aluminum column, spectators listen to a collage of stereo sounds and smell burning incense while watching paintings with pulsating lights. The USCO artists call their congenial wrap-around environment a "be-in" because the spectator is supposed to exist in the show rather than just look at it ... Such psychedelic art is not nearly so potent as LSD or other mind-expanding drugs, but most of its techniques do have a direct physical and mental effect, either tranquilizing or disturbing. Throbbing lights break up the viewer's time sense and give it a new rhythm. Under the incessant flickering of strobes, people appear mechanized, their movements jerky as in oldtime movies ... USCO also puts on a road show, called "We Are All One," that has been performed all over the country. It simulates the psychedelic experience by use of slides, movies, strobes, oscilloscopes, stereo tapes, a dancer and a heart beat. The show has some inspired moments when all the audio-visual equipment combines to create a sensory overload that makes some viewers feel they are having LSD-type hallucinations ... The show finds its most receptive audiences at colleges. Young people who grew up with TV and transistor radios and who take electronic equipment for granted have no difficulty in attuning themselves to the audio-visual bombardment. Older people who prefer what is called a rational sequential experience, i.e., just one movie or a single radio station at a time, tend to freak out ... Many psychedelic artists first gained recognition and employment in discotheques, which they decked out with flashing slides, movies and strobes. USCO's first big commission was to supply The World with 2,000 slides and 2-1/2 hours of 16-mm films and to build the control console which operates the projection equipment ... The way things have been going, psychedelic art was bound to come about. It is a logical merging of routes that art has been traveling for half a century. The Dadaists helped set the course during World War I. Their anarchical performances - simulating screaming of poetry and banging of drums, an orgy of gymnastics amid a conglomeration of masks, marionettes and junk - drove audiences wild. But the prime sources of psychedelic art are the innovations of recent years: the "Combines" made by Robert Rauschenberg, who merged painting with radios, lights, an electric fan; Allan Kaprow's "Happenings," free-wheeling "environments" involving lights, taped sounds, textures and human antics; Op art, with its illusionistic vibrations; and the mechanized contortions of kinetic art ... In fact, just about everything going today is apt to be grist for the psychedelic art mill. The USCO group, in particular, shifts effortlessly from multichannel audio hookup to woven rugs, from "proving out" Marshall McLuhan's theories on media to projecting Hindu philosophies. Their art is concerned both with tuning in on "divine geometry" and showing people "in a concentrated way what's going on around them all the time."

SCENE AND NOT HERD

USCO

BY RICHARD KOSTELANETZ

USCO, USCO—those mysterious initials that magisterially appear in various places and contexts signify US Company (or company of us), a collective of artists who operate out of a forsaken church in Garnerville, New York, about an hour north of New York City. USCO functions as a frame, as well as a signature, for individual artists who move in and out, contributing to the collective effort and yet preserving their personal identities. The quickest measure of USCO's impact is the relation between its age and achievement; for in less than four years, it has completed a multiplicity of projects and established an international reputation.

The core members of USCO are its founders—a painter in his late twenties named Steve Durkee; a younger man with a considerable aptitude for electronics, Michael Callahan; and a thirty-eight year old poet who had occasionally plied conventional trades, Gerd Stern. Their paths crossed in the early sixties, as they helped each other with their respective works. "Gerd was living near here," Durkee remembers, "and he was just turning his poetry into on-the-wall objects. As I had been making objects on the wall for a long time, I helped him. Since I understood that very thoroughly, he was able to say X, Y and A, and I was able to say A, B and Z. That was how the relationship started." A short while later, Stern, then in San Francisco, needed some technical help in making a tape collage, and Michael Callahan, as a technician at the local tape music center, became his collaborator. Not until 1964, however, did they all gather in Durkee's studio-home, the Garnerville church, to combine their collaborative instincts into USCO.

As each moved out of his respective art into collective work, the results of their collaboration became inter-media—works that straddled the walls which traditionally divided one art from another. USCO has produced objects of all sorts—posters as well as machines—but their primary medium has been the theatrical event. Some have been conventional performances, where (Continued on page 71)

SCENE AND NOT HERD

(Continued from page 52)

an audience arrived at a certain time, paid an admission price and then took their seats, but USCO prefers to work in what Stern calls "the environmental circumstance," where "you take a space and an open-ended piece of time, and you see what you can make it do to people." In producing an environment USCO metaphorically creates a world of activity—just as, Durkee adds, "God created the universe."

The best USCO theatrical pieces contain a plethora of communicative stimuli—slides, films (sometimes looped), colored and/or pulsing lights, sounds, objects and even odors—all of which usually function to evoke archetypal themes; a particularly successful piece they characterize as "a beautiful mix." The four-room environment USCO constructed at the Riverside Museum in May, 1966, was probably their most elaborate and brilliant exhibition.

USCO designed this "system" to be a "meditation room," full of basic symbols and materials—male and female, heartbeats, and above, seven spheres representing the seven planets. "We also had five elements," Durkee remembers. "We had sand in the box in the middle; fire in the candles; we had air; we had water in the fountain around the periphery of the column, which was also the lingnam inside the yoni—a psycho-sexual situation. There was an 'om' tape playing on a stereo tape recorder. Have you heard of 'om'? Dome, home, womb, tomb, bomb; the 'om' is in a lot of important things. 'Om' was the original sound of the universe. What we had in that room, in short, was everything that is." Most of USCO's oldest admirers consider the Riverside Museum display its greatest single work, and the exhibition has been memorialized in Jud Yalkut's color film, *Down by the Riverside* (1966).

The effect of an USCO environment is somewhat similar to the psychedelic experience, for in both an awareness of sensory overload disrupts all attempts at concentrated focus and also initiates a gamut of emotional and psychological changes. An intrinsic purpose of such an environment is the challenging of linear habits of organization. "We're dealing with the question of how you can get into the mind with information and images and whether literary, sequential ordering is really the only decent, rational and reasonable input," Stern remarks. Therefore, the connection with psychedelics, while valid, does not explain everything; although Durkee once extensively lectured on the new drugs (which he has since given up), USCO's pieces are designed to turn people on not to themselves but each other. Their principal theme, Durkee says, "is that we are all one. Once we have the understanding that you're not threatening to me and I'm not threatening to you—in other words, that you are myself outside of myself,—then we can begin to work together." USCO's environments present a field of elemental images precisely to make everyone undergo a common reception and then experience a shared awareness. Indeed their conception of art's possible purposefulness evokes echoes of the American Thirties, but the content of USCO's message is more ecumenical than parochial.

The close connection between electronic media and shared awareness has McLuhanish overtones, and sure enough McLuhan's ideas are conspicuously among USCO's influences. Back in 1960 Gerd Stern read an early draft of *Understanding Media* (1964) in the form of a report McLuhan submitted to the National Association of Educational Broadcasters in 1959, and that experience persuaded Stern to consider the artistic potential of the new media. Soon after, his own poetic impulses took off from the problems of black words on white paper and were channeled into tape collage. McLuhan himself has joined USCO for two performances, speaking after and sometimes before a mixed-media presentation. USCO concurs with his prophecy that today's cities will soon disintegrate into small communities, electronically interconnected; and from him, they also recognized how sensory overload in their home environment could recircuit their own sensibilities. "When you live in a twenty-four channel system, day in and day out—as we did when we were doing our things at home, running them for twenty-four hours a day, almost," Durkee

(Continued on page 75)

RIVERSIDE MUSEUM
310 Riverside Drive at 103rd St., N. Y. C. 10025

FOR RELEASE
UNiversity 4-1700

For Release May 7, 1966

Be-In
An environment by Usco

May 8 - June 19, 1966

From Sunday May 8 through June 19 the Riverside Museum (310 Riverside Drive at 103 St.) will present a four room "be-in" by Usco. This exhibition will include paintings, sculpture, weaving poetry, kinetics, electronics, light, and sound.

Usco is a group of people at work together on the new electronic environment, making waves: analogs of head and heart for love and peace. "We are all one," says a member, " in a world of simultaneous operations you don't have to be first to be on top. Our center is an old church at Garnerville, New York, but much of the work comes from individuals and groups in the city and all over the country. As with artisans in traditional societies, the work is essentially anonymous." The Usco show is conceived as a "be-in" to get out of the art gallery "walk-through" world. Comfortable furniture combined with the pieces will make it possible to spend time living with the work. In one case visitors will sit in a fourteen-foot rotating cave.

Most of the pieces in this exhibition will be shown for the first time. An early Usco work, "Contact Is The Only Love" (1963) has been brought from the San Francisco Museum of Art. It is a seven-foot octagon, interlocking rhythms of sound as well as neon, fluorescent, and incandescent lights. The paintings are chakras, totems, waveforms, scriptural messages, tie-dyes, caves, mandalas, premises, portraits, and projections. The sculptures turn, turn and turn. There will be several works in a newly developed diffraction medium. "Ideas of Order," made of IBM surplus, plays itself a random game-a-minute of tic-tac-toe.

Much of the light and sound environment for this show will be programmed, but some of the variables, including stroboscopic light and oscilloscope images, will be playable by those who come.

Open Tuesdays through Sundays from 1 to 5 P.M.
Closed Mondays, holidays.
No admission charge.

For Information: ORIOLE FARB, Associate Director

- PROGRAM -

WHO R U?

Intermission

WHAT'S HAPPENING?

These performances are studies toward a larger multi-media presentation, The Verbal American Landscape. In my Guggenheim Foundation proposal for this work, I wrote: "The audience may be regarded and valued, from a viewpoint of effect, as still another recording apparatus capable of multi-livel operations." - Gerd Stern.

Sociologists on the control panel are Howard Becker, Sheldon Messinger, David Sudnow and Paul Verden. Intermission inquirtes by Paul Verden.

Word-images for the slide poem were chosen by Ivan Majdrakoff and Gerd Stern and photographed by Ivan Majdrakoff who is also in charge of projection.

Projectionists for Tuesday are Max Finstein, Jacques Overhoff and Simon Perkoff.

Projectionists for Thursday are Ron W. Davis, Carl Glicko and Joe White.

The performance photographer is Fred Lyon.

Audio engineering is by Michael Callahan and audio-mix by Michael Callahan, Ramon Sender and Morton Subotnick - all of the San Francisco Tape Music Center. Most of the audio equipment is by courtesy of the San Francisco Tape Music Center.

Telephones courtesy of Pacific Telephone.

Closed circuit television camers and monitors courtesy of Sylvania Electric Products and monitors courtesy of Airtronics, S.F. - specialists in closed circuit television.

Television receivers courtesy of the Women's Board, S.F. Museum of Art, Victor di Suvero and George Walker.

Publicity by Lorrie Bunker of Consultants Inc.

Much thanks is due the entire museum staff, Julius Wasserstein and the initial encouragement of the museum's director, George Culler.

These performances are experiments in the effects of simultaneous communications. We would be grateful for any observations, impressions and critique. Please address such to Gerd Stern, in care of The San Francisco Museum of Art, McAllister St. at Van Ness Ave., San Francisco, California.

> " . . . in the electronic age whose media substitute all-at-onceness for one-thing-at-a-timeness. The movement of information at approximately the speed of light has become by far the largest industry in the world . . . Patterns of human association based on slower media have become overnight not only irrelevant and obsolete, but a threat to continued existence and sanity." – H. Marshall McLuhan

* * *

WHO R U?
&
WHAT'S HAPPENING?

Conceived and produced by poet Gerd Stern in association with painter Ivan Majdrakoff, sociologist Howard Becker and the San Francisco Tape Music-Center. Judy McBean, co-ordinator.

Starring Live Public Figures, Tape, Telephone, Television, Projected images . . .

from

THE VERBAL AMERICAN LANDSCAPE

On Tuesday, November 12, 1963
& Thursday, November 14, 1963
at The San Francisco Museum of Art

For Release From: USCO
21 Church Street
Garnerville, New York 10923
(914) 947-2549

USCO FANS BLOW, STROBES FLASH, FOR INTERMEDIA '68 FESTIVAL

Ten-Foot Fanflashtic by Usco is one of eleven works and events to be presented as part of Intermedia '68, a Festival of happenings, mixed-media, kinetic electronic environments and action theatre. The Festival, managed by John Brockman Associates and supported by the National Council on the Arts and the New York State Council on the Arts, will tour various locations in New York State during the next few months as part of the New York State Council's program of investigations into experimental art forms.

Fanflashtic is an environmental, air-light, kinetic sculpture, which can be viewed passively from outside or actively experienced by pushing through a pair of transparent inflated columns into the center of a ten-foot high, ten-foot diameter, transparent vinyl cylinder. Inside this cylinder a turbulent mass of objects are blown about by a group of fans under a subway grating floor, all illuminated by the flashing of four programmed stroboscopic lamps mounted above. According to Usco, this work is part of a continuing study concerned with time/space interactions.

Materials for this environmental sculpture were donated by Seymour Schweber of Schweber Electronics, Westbury, Long Island, N.Y.; E.G. & G. of Boston, Mass.; Harvey Radio Company of New York City; and hot air provided by Stanley Silverstein of Nina Footwear, New York City.

Ten-Foot Fanflashtic will first be shown at a New York City preview sponsored by The Museum of Modern Art's Junior Council on March 4th and 5th. It will then be shown March 18 through 22 by the State University of New York at Buffalo, from March 23 through 28 by Nazareth College at Rochester, and from April 8 to 13 at Rockland Community College. After that, it will be available for showing in various parts of the country and abroad.

Usco, a group of poets, engineers, artists, film-makers, etc., headquarters in a 100 year-old church in Garnerville, New York. They prefer to present their work anonymously or under the group name, which simply stands for "company of us." Since 1962, Usco has presented intermedia performances and kinetic environmental pieces all over the U.S.A., in Canada and Europe.

Intermedia Systems Corporation

711 Massachusetts Avenue
Cambridge, Massachusetts 02139
617 868-9880

February 28, 1972

Mr. Ken Burke
1200 San Antonio
Apartment C
Austin, Texas 78701

Dear Ken Burke:

Thanks for your letter of February 18th. Michael Callahan and I have taped so far an hour and a half, which has gotten us up to somewhere in 1964. It's slow but rewarding since, if we waited a couple of more years to do this, we probably would have forgotten some of the trenchant details. So you see, you are doing us a service as well as having a service done you. We will copy these tapes and send them on and keep recording in the next week or two and get these to you.

Stan Vanderbeek's address is: Center for Visual Studies, Massachusetts Institute of Technology, Cambridge, Massachusetts. I am sure it will get to him there, although that will not guarantee you a reply. The problem with the entire media world and participants therein is that like the rest of our civilization, real time is squeezed down to double triple and powers of ten use these days. Callahan says real time is imaginary, but we all do our best. The important thing, if you have questions, is to make them specific because then we can research out the answers for you. I'll be intrigued to see what you do with all this massive data after you get it.

Sincerely,

Gerd Stern/fw

Gerd Stern

GS:FW

DICTATED BUT NOT READ

Windsor Station, Montreal 101, Quebec
Tel (514) 861-6811

Wallace
General Manager
I B Scott
Assistant General Manager

Canadian Pacific

January 13, 1972

File: 5100

Mr. Ken Burke,
1200 San Antonio St.,
Apartment C,
Austin, Texas 78701.

Dear Mr. Burke:

In connection with your letter of December 21, requesting background information on our film "We Are Young" which was prepared by Francis Thompson for showing at our Pavilion at Expo 67, I have attached a selection of news releases and certain photographs which I hope will be of some value to you in connection with your study of multi-media at exhibitions.

As far as we know, Mr. Francis Thompson is still located at 231 East 51 Street, New York, N.Y. 10022.

Sincerely,

D. B. Wallace

DBW/pb
Att.

H-12

Canadian Pacific-Cominco Pavilion, Expo 67

NEWS

MONTREAL, October 30 -- Canadian Pacific and Cominco Ltd., today turned over their $4,000,000 pavilion and contents -- film, projectors and exhibits -- to the City of Montreal for future use in Mayor Jean Drapeau's plan for a continuing exposition.

The pavilion thus became the first privately-owned structure to be officially accepted by the city.

The transfer took place at noon with Montreal Mayor Drapeau receiving the master key to the pavilion from Canadian Pacific chairman N.R. Crump and Cominco chairman W.S. Kirkpatrick.

With the pavilion, the city will also get Canadian Pacific-Cominco's popular 20-minute film on youth, "We Are Young", produced by Academy Award-winning film makers Francis Thompson and Alexander Hammid, plus all displays and equipment which the two companies installed for Expo.

The pavilion includes a 600-seat theatre with a giant multi-panel screen in one structure and a separate display building with an audience participation exhibit based upon the five senses -- taste, touch, smell, sight and hearing.

The movie, "We Are Young," won wide acclaim from the more than 2,400,000 people who visited the pavilion during Expo, while the five senses exhibit was particularly popular with children and blind persons.

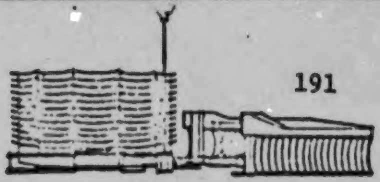
- 30 -

(Oct. 1967) (320)

I. B. SCOTT
Manager, Public Relations,
Canadian Pacific, Montreal, Que.

an Pacific-Cominco Pavilion, Expo 67

NEWS



FILM-MAKERS

MONTREAL - Two Academy award winners, Francis Thompson and Alexander Hammid, have called upon their wealth of motion picture experience to produce the feature film for the Canadian Pacific - Cominco Pavilion at Expo 67.

The film, "We Are Young", was shot on location in Canada, and portrays the development of youth exploring "Man and His World".

From Vancouver Island on the west coast to Peggy's Cove on the east, more than 500 young Canadians helped in the film making.

The production has been called a major step forward in the art of cinematography. It uses an unprecedented multi-projector technique and a unique cluster of six screens to tell its story.

"We Are Young" promises to be one of the most outstanding motion pictures at Expo.

In 1966, the two film producers received a Motion Picture Academy Award for their film "To Be Alive", which was shown for two years at the New York World's Fair.

The film was honored by the American National Council of Christians and Jews, for Outstanding Contribution by a Motion Picture to the Cause of Better Human Relations, and it won the New York Film Critics Special Citation for Creative Use of the Motion Picture.

Francis Thompson has produced films for the New York Museum of Modern Art, the United States Atomic Energy Commission, the American Mental Health Film Board, the Ford Foundation, and others.

Alexander Hammid, with whom Thompson first teamed in 1962 for the New York World's Fair, is a Czechloslovakian-born film director and cameraman who has been making films since 1930.

His long list of credits includes "Crisis", a feature-length documentary of the Nazi infiltration of his homeland, and "Forgotten Village", filmed in Mexico from a story by John Steinbeck.

For some years he was with the United Nations Film Unit, prior to joining with Francis Thompson.

- 30 -

(April, 1967)

Canadian Pacific - Cominco Pavilion, Expo 67

NEWS

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GENERAL RELEASE - FILM

A pair of Academy Award-winning film-makers; a world-wide transportation concern; a major producer of base metals and chemical products ...

A mixed bag indeed. Yet, unlikely bedfellows that they seem, these three elements do in fact have something in common.

The men with the Oscars are producers Francis Thompson and Alexander Hammid; the two companies are Canadian Pacific and Cominco.

What brought them all together was entertainment of a rather unique kind. The meeting ground: the Canadian Pacific-Cominco Pavilion at Expo 67.

The $4,000,000 pavilion built by the two companies is the largest private exhibitor's undertaking at Expo. It is two buildings, one to house an audience participation exhibit based upon the five senses -- taste, touch, smell, sight and hearing -- while the second is a 600-person theatre, where the Thompson-Hammid film, "We Are Young" is screened.

The word "film," doesn't adequately describe what Thompson and Hammid have created. True, it involves motion picture cameras, projectors and screens, but beyond that it bears little resemblance to what one would see in the neighborhood cinema.

At first sight the difference would seem only a matter of technique: multi-screen presentation, using six projectors and a cluster of six screens. The technique permits a display of broad landscape and sweeping action, or instant closing down to a single screen for concentration on significant detail.

However, for Thompson and Hammid the technique made it possible for them to "explore a whole new cinematic world." Unlike working within the confines of one screen, where several parts of the same action have to follow each other, the multi-screen technique "permits us to show the several parts of the action at once ... we can make the association of ideas happen very quickly."

Simultaneous viewing of various scenes, facets of a single scene, or complex and vivid use of synchronized or opposed movement are all possible.

In the hands of a trick-happy film-maker, this complex technique could well become a gimmick -- technique for its own sake. Thompson and Hammid, however, are a highly-creative pair, artists in the use of film, specialists in the "cinematic experience" in which the audience has a true sense of participation.

Their credentials are impressive: an Academy Award in 1966 for their film "To Be Alive," shown for two years at the New York World's Fair, and honored by the American National Council of Christians and Jews for outstanding contribution by a motion picture to the cause of better human relations. "To Be Alive" also won the New York Film Critics' Special Citation for creative use of the motion picture.

Because it is a part of a pavilion expressing the overall Expo 67 theme of "Man and His World," the Thompson-Hammid film has no commercial content. It expresses one aspect of the Expo theme: youth in Canada learning to come to terms with the world in which they have to live. Thompson calls it "a picture of the 'journey' to adulthood ... a composite, in fact, of many children's journeys."

The film's opening sequence is designed to express the popular view of teenage youth, seen through the sometimes-critical adult eye. From there it makes a sudden break, starting off with the very young and developing into youth growing up, youth searching and exploring their world.

The beginning of the "journey" through life is shown with an infant on the beach exploring his immediate surroundings. It then carries on up through the various ages -- six-year-olds horse-back riding on a ranch, the energetic and imaginative games of eight- and nine-year-olds, and 10- and 12-year-old boys hiking in tall forests of Douglas fir. There are the youthful activities of skiing, sailing, hitch-hiking, and a cross-country jalopy excursion, the latter involving the 17 to 19 age group.

Each stage is a further step in the youthful journey to adulthood, beginning with the exploration of the immediate surroundings, evolving into a slightly more adventurous exploration, the discovery of nature, and then new discovery and interest in people.

Youthful idealism, inevitably followed by disillusionment, in turn evolving into a more mature interest in life is seen through the eyes of two 20-year-old girls. Arriving in the city with high hopes, they land a job with a large company only to find it involves tiresome, repetitive work. At home, tired and disillusioned, they turn on the TV, only to catch a newsreel showing many of the miseries of the adult world to which they had so long aspired.

Plagued by the question, "what is life all about?" the girls gradually discover the answer. They see a variety of other young people, from manual workers to the most highly skilled scientific investigator, all at work building toward the future. Each is trying to find those same answers; each is continuing the search which the truly-aware adult realizes does not end at age 21.

Thompson's message: simply, "don't lose the exuberance of youth, don't stop exploring ... be mature, by all means but don't lose your enthusiasm ..."

None of the cast of 340 teenagers, 65 adults and 50 sub-teens are professional actors. "Untrained people have a spontaneity and simplicity that trained actors and actresses don't often retain," says Thompson.

How did they get their actors? "We simply asked them ... hardly any refused. Most people like to be in films and are pleased to be asked."

C

For Thompson and Hammid, their subject was a challenging one -- the more so when one realizes that moments of youthful experience extending over some 21 years had to be presented in just 20 minutes, or 10,800 feet of film for the total of six projectors. That's about one-tenth of the total 100,000 feet-plus shot across Canada over a 35-week period. Editing ("an agonizing process") has taken a further 20 weeks.

Because the film-makers are seeking to give their audience a sense of involvement, setting the mood of the film has been of primary importance. "We feel film is primarily an emotional medium .. it should stir people up, make them happy or sad."

In evoking a mood, the timing or "pacing" of the film is important. It is for that reason that both the script-writers -- internationally-known National Film Board director -- Donald Brittain, and television writer Alex Pelletier -- and the composer of the music score, New Yorker David Amram have been closely involved with the final editing -- "so they will feel comfortable with the film," says Thompson.

Because the film is primarily a visual experience, the spoken word "is never allowed to intrude," says Brittain who is writing the English commentary in collaboration with Mrs. Pelletier on the French. As a result the commentary is brief, serving as a guidepost for the audience and to maintain the continuity.

Just as the script is necessary but never obvious in itself, so too with the music. David Amram, who is presently resident composer with the New York Philharmonic, has written music for many distinguished New York productions, and for several films, including "The Manchurian Candidate."

Amram, who looks upon the music for the film as a sort of musical narrative -- "not as background music" -- terms the film itself "almost like music."

What Thompson and Hammid have done, can in fact most easily be described by likening the six screens to a six-piece orchestra, with the film-maker as the conductor. A piece of music played well is remembered as a fine piece of music -- not as six pieces of music put together. The listener doesn't remember the performances of each individual musician, he remembers the orchestra.

That is what Thompson and Hammid have done on the screen to have the audience remember the film as a whole experience, not as a film shown on six screens.

The theme of youth in itself is not new, nor for that matter is the multi-screen technique. What makes the film unique is the men behind it. The tone is light without being frivolous, the photography is beautiful, and the screen cluster concept adds new dimensions without ever being obvious in itself.

They may seem pretentious terms; but when one leaves the pavilion, one will know what is meant by "visual poetry" or "cinematic symphony."

MONTREAL - A revolutionary film presentation and a unique display area reflecting the Expo '67 theme "Man and his World" through the use of man's five senses are the twin attractions of the Canadian Pacific - Cominco Pavilion on Ile Notre Dame.

Designed by DeMartin - Marona (Canada) Ltd. and situated on 40,000 square feet of land, the pavilion consists of a theatre, an exhibits building and a landscaped plaza area including lagoons and fountains.

The overall effect, given substance by zinc-coated steel sheet fins stacked vertically on one building and horizontally on the other, is one of rhythm and expansion.

The 12-sided theatre building, 8,200 square feet in area, is sheathed in 264 horizontal fins which project from the surface and will be illuminated at night to provide a striking exterior effect. The dodecagon shape is symbolic of the many facets of the two sponsoring companies.

Francis Thompson Inc., international award-winning movie makers, are producing a film to be shown in the theatre. Using original filming techniques and multi-screen projection, the film will depict the "Man and his World" theme with an accent on youth.

The 8,500 square foot exhibits building will complement the rhythmic and color qualities of the theatre. It will be sheathed in 164 vertical fins and will house exhibits telling a more detailed story of the two companies' products and services. This will not be a technically-oriented display, but one that will stimulate the creative instincts of the viewers as well as informing and entertaining them.

The $4 million pavilion is the largest individual corporate project at Expo. Located diagonally across from the U.S.S.R. Pavilion, it is close to the Cosmos Bridge leading to the U.S.A. Pavilion and next to a Minirail station.

Visitors will start their tour of the pavilion in the ~~55~~ 600-seat theatre where the 20-minute film - which has been ~~more than a year~~ 18 months in the making - will be shown every half hour.

The film producers have used the multi-screen technique to contrast exhilirating scenes of sweeping action with detailed single screen close-ups. From both technological and entertainment view-points, the film promises to be a major milestone in the history of cinematography.

After the film, visitors will be able to relax in the plaza area where a restful atmosphere will prepare them for their next delightful experience of "Man and his World", in the exhibits building.

Here the five senses - sight, sound, taste, smell and touch - will be brought into play in a series of unique exhibits and combined in a grand finale that will emphasize and summarize the relationship of these "sense areas" to the activities of the two sponsoring companies.

- 30 -

S. M. FISHER,
Public Relations Representative,
Canadian Pacific, Montreal, Que.

(125) Sept. 8/66

Murray The K's World

Bring your shades...

'cause what you're gonna see will strain your eyes!

It's definitely out of sight. *You* are the center, and everything is happening around *you!* If you are a "thinker" you may blow your mind. Dancing in a new dimension—surrounded by 21 giant screens—some of them movie, some of them closed circuit TV, some moving slides with visual sound, all of them popping with action, and synchronized with what's happening. The live entertainment on suspended stages is like no other shows or sounds you've *seen.* Yes we meant sounds you'll *see.* Even when you *see* it you won't believe it. Those screens will be popping with the *guys* you'll love—the *girls* you'll love—the *things* you'll love—there's room for them all—and you'll see them bigger than *life* and life will look different. Music will have a *new* meaning. You will have a *new* attitude and we defy you to maintain your cool. If you're up tight—come to where the *lights* change, the *scenes* change, the *entertainers* change—and *you'll* change—right in the middle of the most revolutionary thing that ever happened to the world of entertainment—It's a trip.

Murray the K

Friday, Saturday and Sunday Evenings, 8 pm to Closing
(18 years old or over)
Saturday and Sunday Afternoons, 2 pm to 5:30 pm
(16 years old or over)

WHAT YOU WEAR SHOULD SAY SOMETHING. Fashion plate or out of date.
Even improvise. Tails with dungarees, evening gowns with boots.
Formal, mod or casual too, but plain sloppy just won't do.

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Parking Free with
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Admission $2.50
Reserved tickets available
Phone: 516-PI 2-2727—or write.
Stag or Dated

GALA OPENING FRIDAY, APRIL 1st, 8 PM

NATIONAL FILM BOARD
P.O. Box 6100
Montreal 101, Quebec

CANADA

OFFICE NATIONAL DU FILM

January 4, 1972

Mr. Ken Burke
1200 San Antonio Street
Austin, Texas 78701

Dear Mr. Burke:

I have attached a copy of our Technical Bulletin on the Labyrinthe set up and following is the address for:

Roman Kroitor
5165 Sherbrooke Street West
Room 211
Montreal, Quebec, CANADA

Sincerely,

Geo V Fanning

George V. Fanning
Publicity Division

Enc. 1

STATE OF NEW YORK
DEPARTMENT OF COMMERCE
METROPOLITAN AREA OPERATIONS
230 PARK AVENUE
NEW YORK, NEW YORK 10017
TEL. [illegible]

NEAL L. MOYLAN
COMMISSIONER

MICHAEL F. WOODS
DEPUTY COMMISSIONER

The information supplied is in response to your recent inquiry.

We welcome this opportunity to serve you. If we can be of further assistance, please call on us.

Sincerely,

M F Woods

Footnote:
Possibly an organization such as
International Assoc. of Fairs & Expositions
777 Arbor Road
WinstonSalem, N. C. 27104
could refer you to sources of information.

UNITED STATES GOVERNMENT PRINTING OFFICE
PUBLIC DOCUMENTS DEPARTMENT
WASHINGTON, D.C. 20402

Thank you for your inquiry which we are returning. We cannot identify a Government publication on sale by this Office containing the information you desire.

Perhaps your local librarian can help you. Librarians are professionally-trained in the techniques of research and have access to Government and non-Government source material not available in this Office.

Sincerely,

ROBERT E. KLING, JR.
Superintendent of Documents

SD 257-71

CONSULATE GENERAL OF THE CZECHOSLOVAK SOCIALIST REPUBLIC
1305 PINE AVENUE WEST, MONTREAL 109, QUE.
TELEPHONE 849-4495
CANADA

Čj.3519/71-Vo

Montreal, December 30, 1971

Ken Burke
1200 San Antonie St. apt. C
Austin, Texas U.S.A.

Dear Mr. Burke,

I wish to inform you that we have sent your letter, dated December 21, to our Embassy in Washington with request to reply.

Yours truly

Stanislav Novotný
Consul-General

FLIES MANY FLAGS

International Association of Fairs and Expositions

Dec. 29 1971

Dear Mr. Burke:

I wish I could heap you. All of our members are state and county fairs. We do not count in our membership Worlds Fairs so I have nothing about them.

Sincerely

Frank Kingman

OFFICERS — PRESIDENT: Jack K. Clarke, Central Canada Exhibition, Ottawa, Ont. — **VICE PRESIDENT:** Arthur K. Pitzer, North Carolina State Fair, Raleigh, N. C. — **SECRETARY-TREASURER:** Frank H. Kingman, 777 Arbor Road, Winston-Salem, N. C. 27104

DIRECTORS: Miss Marie McKinney, Mid America Fair, Topeka, Kan. — William L. Mullaney, Erie County Fair, Hamburg, N. Y. — Crosby Murray, Tennessee Valley Fair, Knoxville, Tenn. — H. H. Parrish, Orlando, Fla., Federation of Fairs — Wendell W. Prater, Kittitas County Fair, Ellensburg, Wash. — John D. Rennie, Pacific National Exhibition, Vancouver, B. C. — Joseph B. Rucker, Jr., State Fair of Texas, Dallas, Tex. — Ty W. Sincock, Steele County Fair, Owatonna, Minn. — Arthur G. Springer, Jr., Chattahoochee Valley Fair, Columbus, Ga. — G. W. Wynne, Eastern States Exposition, West Springfield, Mass. — James P. Young, Blue Grass Fair, Lexington, Ky.

UNITED STATES OF AMERICA
GENERAL SERVICES ADMINISTRATION
National Archives and Records Service
Washington, D.C. 20408

207

December 17, 1971

Mr. Ken Burke
1200 San Antonio Street
Apartment C
Austin, Texas 78701

Dear Mr. Burke:

Your letter to the U.S. Information Agency has been referred to this office for a reply.

The Office of National Archives has custody of the permanently valuable records of the Federal Government. Many Government agencies have used audiovisual materials for different purposes. The records of the Committee on Public Information for World War I show how this office used still pictures, lantern slides, posters, speakers, and motion pictures to carry out its mission. The records of the Office of War Information for World War II would be another key area, including a heavy emphasis on radio broadcasts.

In addition to paper records, the Archives maintains extensive collections of still pictures, motion pictures, and sound recordings, many of which would be intricately connected with your field of research. But comparatively few of these records date beyond the period of World War II. For more recent information you would have to consult each government agency itself. One example is the Expositions Office of the Department of Commerce.

In any case, one would have to do this kind of research in Washington. We would be very pleased to put our records at your disposal for this purpose.

Sincerely,

James W. Moore

JAMES W. MOORE, Director
Audiovisual Archives Division

Keep Freedom in Your Future With U.S. Savings Bonds

SEATTLE CHAMBER OF COMMERCE

Dear Mr. Burke,

Thank you for your letter. We regret the necessity of answering with a form letter, but the current volume of mail makes it impossible to answer each as personally as we would like.

We hope the information we are sending you will answer your questions. If you need any further assistance, please do not hesitate to let us know.

All the records from the Seattle World's Fair are now stored in a vault in Olympia. Perhaps you can obtain the information you need by writing there.

Sincerely,

Patricia Gormley
Special Services

215 Columbia Street- Seattle, Washington 98104-Area Code 206 MA 2-5060

January 17, 1972
215 Dial Street
Ft. Benning, Ga. 31905

Mr. Ken Burke
1200 San Antonio Apt. C
Austin, Texas 78701

Dear Ken:

Your letter arrived while I was home on leave over the Christmas holidays. I'll try next week to write you a detailed letter concerning the information that you need for your thesis project; however, in the meantime, this will just be an acknowledgment that I have received your letter and will be more than happy to assist you. Enclosed you will find an outdated booklet concerning some of the instructional media available at the Infantry School.

Just to give you a general idea of what we have available, let me list the following for you:

1. First, we have the first color television system in the Army. This consists of 8 channels of cable television supporting some 4,500 students at any one time. Our production capability includes a fully equipped studio and remote van.

2. Computer Assisted Instruction -- We have one classroom that is equipped with CAI using a Honeywell computer.

3. EDEX (Student Response Teaching System) -- EDEX is a system utilizing automated audio, slide, and motion picture with a simple and immediate respond system.

4. Individual Learning Center -- We have recently built a 50 carrel individual learning center utilizing television, Super 8 motion picture, 35mm slides, and audio tape recorder. We are currently expanding this to 75 carrels which will include the new Sony 3/4" cassette television.

If you will either write or call me (office: 404/545-7415, home: 404/545-4925) in the near future giving me exact requirements concerning the information that you need for your thesis, I will be more than happy to supply you with the information. In addition, there are 27 other educational television stations scattered around the country, and I can provide you with their addresses and contacts at each.

Tell Bob Brooks that I said "Hi" and am sorry that I missed him over the holidays. I plan on returning home in July to catch up on old friends. Again, anything that you need, please feel free to ask. I'll be more than happy to assist you.

Sincerely,

Melvin W. Russell

Enclosure

Москва, февраля 1972 г.

Г-ну Кэн Бюрк
ул. Сан-Антонио 1200
Остин, Техас 78701
С Ш А

Уважаемый г-н Бюрк,

Ваше письмо, адресованное в Министерство торговли СССР, было передано нам, в Комитет по кинематографии. В этом письме Вы высказали желание получить сведения относительно использования в СССР специальных аудиовизуальных средств (полиэкран, круговорама и т.п.), характеризующихся наличием нескольких каналов передачи информации.

К сожалению, должны Вам сообщить, что в нашей стране не существует отдельной организации, которая занималась бы изучением и созданием интересующих Вас систем. Отдельные системы и устройства, которые по своему характеру могли бы Вас заинтересовать, разрабатываются и изготавливаются различными организациями, главным образом, для выставок, целей рекламы и др.

В связи с этим мы не имеем возможности сообщить интересующие Вас сведения.

С уважением

В.Рудаков
Начальник Управления кинотехники
и кинопромышленности Кинокомитета СССР

CULTURAL COUNCIL FOUNDATION
CREATIVE ARTISTS PUBLIC SERVICE PROGRAM

March 24, 1972

Mr. Ken Burke
1200 San Antonio, Apt. C
Austin, Texas 78701

Dear Mr. Burke:

Following are the addresses you requested:

Don Snyder
348 West 23rd Street
New York, New York 10011

Aldo Tambellini
572 Atlantic Avenue
Brooklyn, New York

Robert Whitman
35 White Street
New York, New York 10013

Jackie Cassen
727 6th Avenue
New York, New York

Rudi Stern
454 Broome Street
New York, New York 10012

Roberts Blossom
233 West 83rd Street
New York, New York

I hope this will be of assistance to you.

Sincerely,
Madeleine S. Ferris
Madeleine S. Ferris
Program Director

MSF:js

DIRECTORS
Sheldon Oliensis, *President*
Robert G. Goelet, *Secretary-Treasurer*
Arthur G. Altschul
August Heckscher
Dore Schary
Bethuel M. Webster

Address replies to: Creative Artists Public Service Program
250 West 57th Street, Room 430, New York, New York 10019, (212) 247-7701
Madeleine S. Ferris, *Program Director*

WED imagineering

WED Enterprises, Inc • 1401 Flower St • Glendale, Calif 91201 • 245-8951
A Subsidiary of Walt Disney Productions

April 4, 1972

Mr. Ken Burke
1200 San Antonio, Apt. C
Austin, Texas 78701

Dear Mr. Burke:

Thank you for your letter of March 31, 1972 requesting information concerning Disneyland's "Rocket to the Moon" attraction.

Your correspondence has been forwarded from Disneyland to WED Enterprises. WED (the initials are those of Walt Disney) is the design and engineering division of our company responsible for developing outdoor entertainment.

The "Rocket to the Moon" attraction at Disneyland was completely re-designed concurrent with the opening of the "new" Tomorrowland in 1967.

Enclosed you will find general informational material concerning this exhibit. Unfortunately, we cannot provide cost data, specifications, or photographs.

Thank you again for your interest in Disney.

Sincerely,

Robert C. White

Robert C. White
Concepts Department

RCW:mb
Encl.

im•ag•i•neer'ing, n. Imaginative concepts in Design, Architecture, Engineering and Entertainment.–Syn. See DISNEYLAND.

DISNEYLAND'S ALL NEW
Tomorrowland

© 1967 Walt Disney Productions

DISNEYLAND'S MOON ADVENTURE
UTMOST IN SPACE-AGE REALISM

Disneyland, working with McDonnell Douglas Aircraft, has created a realistic and exciting "Flight to the Moon" adventure for the new multi-million-dollar Tomorrowland.

"Flight to the Moon," carries guests "out through space" where they feel the pull of gravity during blast-off and the weightless escape from earth.

Based on the latest information from the nation's space exploration projects, the new adventure will give guests the thrill of seeing the moon come closer and watching Earth become a colorful basketball in the sky. Visitors will get a good idea of the texture and roughness of the moon's surface, and see a future lunar exploration party at work.

Before their flight, space voyagers will visit Mission Control, where outer space activities are monitored on huge viewing screens throughout the center. A "control central director" will present the latest, most accurate information on space exploration to Disneyland guests.

DISNEYLAND'S ALL NEW
Tomorrowland

© 1967 Walt Disney Productions

TOMORROWLAND FACTS AND FIGURES

The new Tomorrowland covers an area of over five acres (227,500 square feet), and stretches, from door to door of each attraction, just one-half mile.

Monsanto's Adventure thru Inner Space is a journey into the world of the molecule through a 37-foot Mighty Microscope. The attraction is housed in a 21,733 square-foot building located at the right entrance to the new "land." Up to 3,275 guests per hour can be carried into the adventure.

Bell Telephone's America the Beautiful presentation takes guests from the East Coast, to Hawaii and Alaska in a new 80-foot-diameter circular theatre. Up to 3000 guests can visit the 17-minute attraction per hour.

General Electric's Carousel of Progress attraction is housed in an 83,000 square foot pavilion with six auditoriums, each seating 240 guests. In these auditoriums the progress of electricity is depicted in the 1890's, 1920's, and 1940's and Today. A second show for Carousel of Progress guests, Progress City, is located on the second floor of the pavilion. Here, spread out in capsulized realism, is a 7000 square foot city of the future done on a 1/8-inch to 1-foot scale. The city is complete with 22 types of transportation systems.

Disneyland guests become "Astronauts" in the new Flight to the Moon adventure presented by McDonnell Douglas. A Disneyland space Port, complete with a Mission Control and Lunar Transports has been created especially for the new attraction. As many as 1,620 passengers per hour can orbit the moon in the fifteen-minute adventure.

A new concept in intermediate transportation makes its world debut at Disneyland this summer — the Goodyear PeopleMover. Also designed by WED Enterprises, Inc., this all-electric conveyance system travels 3,250 feet throughout Tomorrowland, passing through many of the new attractions for a "preview." The 62 four-car PeopleMover trains never stop running, carrying as many as 4,885 passengers per hour.

An all new Rocket Jet Adventure will mark the highest point (85 feet) in the new Tomorrowland. Nearly 600 passengers per hour can experience this adventure in 12 Rocket Jets.

Dining, Dancing and Live Entertainment in the comfortable atmosphere-of-the-future are offered in Coca-Cola's Tomorrowland Terrace. This restaurant will feature daily entertainment and the latest in cooking, serving and bussing techniques.

And, so, new Tomorrowland is here, firmly proving that Walt Disney's promise to grow was not limited to his own years. That the creativity, which was given new meanings and new applications by Walt, will continue.

# # #

refocus
iowa memorial union
the university of iowa
iowa city, iowa 52240

an exposure to films,
photography, and people

refocus 72

NEW DIRECTIONS IN AMERICAN IMAGERY
8th Annual Film and Still Photography Festival
April 14-23

At last the program format for Refocus 72 is drawing together. The following will serve as a temporary outline of events - films and lectures. It, of course, is subject to change. An added attraction to our original program will be the American Federation of Film Societies Regional Screening to be held April 21-23. The theme for the Regional screening is "Cinema for the 70's - The Political New Wave". All film programmers - societies and students interested in obtaining reservations for these screenings should contact us. Admission to all of the AFFS screenings will be a blanket $2.00 (plus tax). Most of the Refocus events will be free - several film screenings will have nominal admission charge. Applications for the National Student Photo Display and the 8 mm competition are still being accepted.

We will be presenting several programs in Video Tape - if you have tapes, (½" EIAJ Standard) please send them or bring them along.

Only people will make Refocus a festival - come along - it'll be an eye-high.

Lectures

Gene Youngblood - "Videosphere" - "Expanded Cinema" - April 16, 17, 18
Todd Walker - Photography - April 20
Peter Bunnel - Photography curator Museum of Modern Art - April 21
Joe Kirkish - Photographer - April 18
Gene Walsh - Comtemporary McGraw Hill Film Distribution - April 21-23
Jon Jost - Independent Film Maker - "Mad Mountain Movies" - April 18
Fred Becker - from U of Iowa - film "Heroes"
Geoffrey Bartz - independent film editor - "Part of the Family" - April 21
Rob Fisher - creator of Mem Brain - April 15-16
Charles Swedlund - Southern Ill. University - Design - April 19

National Student Photography display from over 25 schools opens April 15.
Todd Walker display in Museum of Art.
A presentation by the Chicago Art Institute will happen over a three day period during Refocus.

Dear Mr Burke,

I'm delighted you want to know about my work Bor your thesis, and I willhelp as I can.

My (our) first performance was at the York Theater in 1961, April 17th (~~[illegible]~~). It was done one night, and though scheduled to be done the following Monday, the show was cancelled as the audience reaction was so peculiar. Sculptors and painters in the audience kept bravoing (not a claque), but advetising people, who, I understood, constitued a majority of the audience, kept hissing. I'll try to Xerox Michael Smith's review of it.

The evening lasted, I would gaess, two hours and there were ten pieces, most of them by me.

There was a performance of works at the Living Theater two nights, I believe, in 1963. When, I'm not sure. Stephen Tropp, Mario Jorrin and I were the composers. As at the York we used an old 16mm. movie projector (silent, though very noisy), and two slide projectors. That was our standard equipment in most shows, plus scrim, a tape recorder or two, and actors.

June 1, 1964: we premierat the American Arts Project. For how long? Four days? I did "A Man and His Dog," which is a man on stage, his face coyered with black checkboard squares (the skin being the white) acting and reacting to earie taped sounds. "The Railroad Station," a piece with one projected slide for each scene, plus Taylor Mead and I two gay old dull blades trying to discover a means of communication and finally ending up in deaf and dumb language, as the train pulls in. My (then) wife danced as I played my fingers over the lens (without film) of our trusty movie projector. Remarkable how many lovely effedts occurred.

A lovely piece by ~~Stephen~~ Tropp was included, called Poem for the Theater No. 6. It consisted of a background movie shot by Mario Jorrin and directed by me, in negative, of six girls in gossamer nightgowns sleepwalking on a Greek-type rotunda. We used Bachianas Brasilieras No. 5 of Villo-Lobos as the music. Very romantic. Oh, my wife, Beverly Schmidt, danced in a Chinese red dress against the ghostly background of young but aged goddesses, and we were roundly cursed by the consciousness-mining artists of the audience.

On May 2nd 1964 I helped my wife Beverly do a dance concert at the YMHA on 92d Street here. My piece was "America, Scene 4" (there were four written scenes of which I did only one), which consisted of myself appearing in color and sound (that is, my face, which sports blue eyes, a red beard, and white skin), and while the National Anthem is heard, modestly being flattered out of my wits by unheard compliments. Then I"watch" myself come on stage (still red white and blue) and embarrass my larger screen image by not finding anything to say, and stuttering, hemming and hawing. I finally do a dance, which is rather chaotic, and it makes my picture fade. Ah! I remember. As background picture fades, lights come up (border lights from below), and give me many shadows of different intensities as I dance. Different colors, too.

I believe it was 1965 that "Blossoms" was done at the Second City (four nights). [illegible] That is, Paul Sills "seond City" was playing regularly at Square East (now no longer) on E 4th St, and we were given Monday and Tuesday nights for two weeks. The opener: two large white plaster statues, Mommy and Daddy, sat in two large wheeled chairs facing the audience. Over them played a mafvellous film (about twenty minutes long), which I had bought for $1.50 near Times Square, about an underwater circus in Florida, filmed almost entirely under water. It played over the statues and and a large screen behind them, and was accompanied by sounds, over tape, murmurs of the statues' consciousness and beyond. A charming witty piece, though the only comment I got about it was from a middle-aged lawyer who told me he culnd't see the film for the statues.

The second piece was Taylor Mead (undergroundfilm star) doing (live) a striptease to Musak. That is, he (again) wore red white and blue and was covered with tin cans, pinned to his blue jeans and his red shirt, and to strains of Mantovani, I believe, he "undressed" seductively a la Sally Rand.

The third piece of note was a film of Beverly Schmidt dancing, taken by Mario Jorrin, directed by me. It was fine uncut film, using many different lenses, and angles, and a more or less Eisenstein shot relationship (that is, as much opposition between one shot and the next as possible, in content and form and motion). Beverly danced four dances before this film with four different kinds of music, ranging from Bach to Mantovani again. It was visual counterpoint, and the final dance, to Vivaldi, was an actual visual counterpoint, step for step, between Beverly on stage and on screen. A lovely experience. Saul Gottlieb nodded his head in The Voice. One projector and two slide projectors and a atpe recorder were our technical equipment. I don't recall any of the other pieces, except "The Professor", which is a standard piece I did on all the programs up to that point, using a tiny bit of film and a number of slides, and myself giving a professorial lecture on birth. The slides conflicted obliquely with the monologue, giving rise, hopefully, to a bemused state of unexpected thoughtfulness in the audience. I am afraid it merely bemused many.

What else? I did two shows at Judson Memorial Church Poets' Theatre, when I cannot recall, though the latest one was about three years ago, ah!—June, 1969. In the latter I introduced "Chinese Dancer," one of my longer and better pieces to date. I'll send you a copy! "A Rehearsal" was also done then, but had been done before at The Bridge Theatre, when I don't know. I did two shows at the Bridge Theater with my wife in the late sixties, and another piece introduced there and at Judson was "La Luz," a piece about an old man, played by me, on screen and stage, dressed in diapers and a long white beard. He keeps repeating "Life is short," in various languages. If I find a copy I'll send it. The only people to date who have expressed delight in this piece have been ministers, though I remember getting roundly applauded for it at the Bridge (a surprise!).

Nothing since, and nothing again, unless I am invited, and paid well, and given all the equipment I need, and so on. And even then— I am no longer really interested. Film stage has had its day, in my opinion, though the intent of it passed right over the consciousness of practically all who experienced it. Meaning: people weren't ready, or I didn't do my job proper ly. But I did. My pieces, most of them, are artistic successes, in the same sense that some of the best abstract paintings are. I don'tthink I'm boasting. Many painters and sculptors here have understood what I was doing. If the time will come again for my work to be exhumed and viewed, I hope it will be felt that an attempt was made to reach a poetic language for eye and ear.

Shall I speak of my reasons for making these works?

I am convinced, or have been, that Americans areunduly limited in their feeling, thinking and expression. That does not go for all of them, of course, but I find an unusual kind of slavery abroad in this country. And that is, a slavery of language paucity. What do I mean? "American is complaint mosaicked into tone." This is one of the poetic statements I've made of it. The opposite, I have come to realize, is perhaps equally true: that American is an old skin (English, rigidified) in which new wine is fermenting.

I wrote my filmstage pieces as I wrote my poems. Theycame to me, once I had done enough thinking, and reached a state of ferment. My purpose was to broaden the language experience of the audience; to say a great deal in a short space, knowing that the eye and ear working independently can handle a great deal. It was, and still is, too unaccustomed a means of communication for people to grasp a great deal of what I'm saying. They will have to be trained. My future audiences, if any, will have to be trained to understand me. When the right machines emerge, visual phonographs, for example, my pieces will be something like Webern's, though for the eye and ear.

A new world language is emerging, of gesture and sound. Words may be used, but with an awareness of the creativity of words, the dependency of expectation (our usual language depends on meeting usualness in the eye and ear, equaling expectation with performance. Insofar as it does this, it is no language at all, but a funeral rite for the soul. There is a language of the soul, however, which can be learned.) Peter Brook is working with actors in Paris (French and English together), trying to develop a new language called Orghast. A Polish director has done similar work in Poland. Tom O'Morgan's work, using just actors, not film and stage, is similar. Language expansion is the method and the goal. Old languages will fall like snakeskins by the wayside when we discover the potentialities of sound and gesture.

This has been my purpose in the theater, and my only purpose. To raise consciousness (when I culd reach it) by stimulating it to new exercises, toward a poetic vision and version of things. I feel now I have been naive not to have recognized the great chunk of rock American consciousness has become, not, that is, to have been a sculptor (in my mddium, or a similar one), rather than an abstract watercolorist.

My influences have been an English nurse, who spoke a language, when I was a child, of such ebb and flow and nuance and feeling that never after that could I be staidfied with what I heard and saw (for gesture is part of language) around me. I had to suggest to people that they are in a language bind. But nobody listened. Poorpeople. They think their problems are elsewhere than they are.

Other influences: dissatisdfaction with the dried-upness of American speech and thought. John Keatsy Walt Whitman, tracts on identity crises in contemporary America, juvenile delinquency, Jewish gesture, Italian speech-and-gesture, delight in living, dreaming, being alive...

I have not been influenced by John Cage, except in my most recent poetry. He, however, has been influenced by me. He and Merce did a dreadful filmstage show some years ago on Long Island, which I walked out of. An assault on the senses.

I'll leave you with this. I hope you have much good luck with your thesis.

Yours truly,

Roberts S Blossom

PS If you need more info, write.

Roberts S. Blossom

233 West 83rd Street
New York City,
New York

Poet:	Rembrandt, Excusology of the Ocean (books: latter, Interim Press) Six American Poets (anthology), ed. Jack Micheline Numerous magazines
Playwright:	Inventor of filmstage medium. Shows at Second City, Living Theatre, Judson Poets' Theater, many others. Some reviews and article in Tulane Drama Review included. Short play included, printed in Chelsea Magazine.
Actor:	Starred in "The Physicists," appeared in other Broadway shows, and most recently featured in "Operation Sidewinder" at Lincoln Center.
Recipient:	Rockefeller Grant for Experimental Work in Theatre ($13,000--1967)
Degree:	B.A. in theatre, Western Reserve University. Also attended Harvard, Bard, Williams, Cleveland College.

CHINESE DANCER

by Roberts Blossom

Curtain opens. UPstage a screen. Onstage appears from within screen an elaborately dressed Chinese dancer. HE dances. Sounds: clinking of beads, autos passing, trucks.

A LECTURER appears, sets up lectern DL. HE is Chinese. HE nods to audience, smiling, arranges papers. DANCER is standing, right stage (like Indian, quietly) facing left stage, in shadow.

Lecturer

The possibirities of a Chinese civirization are maniford. We are today in the midst of a worrd revorution

SOLDIER, very dirty and tired and thin, appears on screen and sits on ground.

Lecturer

(during this) Everywhere sordiers congregate and express themselves

Soldier

God damn son of a bitch (perhaps about fatigue and lice, etc)

Lecturer

there is revorution, there are the signs

SOLDIER lies down to sleep.

Lecturer

He dleams,perhaps, of palaces and dancing girls. Perhaps not.

DANCER begins slow dance.

Lecturer

Perhaps he dreams of an ancient stone that spouts water in the midst of drought, that spouts youth in the midst of despair

SOLDIER curls up slightly and turns toward audience in HIS sleep.

Lecturer

Perhaps he dreams of you sitting in these chair, making sense of what we do.

Lights out on stage. Lecturer goes off. DANCER then too, upstage.
SOLDIER gradually fades.
On stage a DANCING GIRL appears. HER music is als beads.
HER voice accompanies in low husky tones (almost whisper) and slow. Murmur, and then:

Dancer

Sang a song a while a go

Sang a love a while a go

Lights dim out.

Chinese Voice

(in dark) Now that the revorution has begun we are going to join the fields of battle where you will observe the forces that conduct today's rives in their grip,-- and tomorrow's destinies.

SOLDIER's ravaged thin face on screen.

Soldier

Mother fucker!

LECTURER comes back on, bringing lectern.

Lecturer

You may ask what is this word 'motherfucker'which we do not know in China and which is part of Western philosophy along with automobiles and erectric rights.

SOLDIER's face fading to white.

Lecturer

It is very curious word. Erectric right change day to night or night to day, but 'motherfucker' what this change? I do not know.

During this JIMMY, a thin old bum, upright and sprightly as a bird, quiet as dust, comes on upstage in semi-light seeming confused.

Jimmy

(to LECTURER) You want to know what changes? Everything. The way you're standing. The way they're listening. (Moves fingers.) The fluid in which I move my fingers...You're talking to them, but it makes your talk and their listening a little (oscillates horizontal hand in air) -- irrelevant maybe. I've known the world a long time. It sings in the bowels of the defeated and flies like desperate birds out of the stuffy attics of our

CHINESE is getting restless.

Jimmy

Excuse me. Did I come in the wrong door? (twists around)

Chinese

I don't know what you do here. It--

Jimmy

What I do here. It

Chinese

You--inconvenient

Jimmy

(toward audience) Yes I am.

SOLDIER's head appears on screen and watches them both, turning eyes.

Chinese

(shouting to back of auditorium) I ask the porice take this man away.

Jimmy

No.. You conjured me up. (to some one in front row) Gimme a cigarette.

Chinese

(coming toward HIM) I can lecture on no worrd revorution with you here.

Jimmy

(seated now) The worrd revorution is what I am here about.

Chinese

What party you representative of? (Smiles at audience.)

SOLDIER's face is receding.

Jimmy

I represent the world. I am the very essence of what you're seeking with you communism and your--shall we say?--weighty past.

Chinese

How can you be?..We are the bright sun.

Jimmy

No....You are one figment of truth--one sliver of the mirror...These are another. Do you not think they sing and dance and have their dreams?

CHINESE comes over to JIMMY and whispers in HIS ear.

Jimmy

Motherfucker. Yes. Why are there people among you who say 'motherfucker'? A deep pity is needed to unravel the darkness of this dream.

On screen in blur much city action. (& sounds) Gray shadows rise and sway there. After a bit, as noise quitens:

Voices of Shadows

We are the dead who have died in your cities

Not alone in the cities of Man

But everywhere in the universe where beings congregate to enslave

Their fellow beings for no reason

The SHADOWS darken slightly. The VOICES rise.

Shadows

We have been put on the lists of eternal wanderers

Men that have no destination but waiting

And moving in the landscapes of soot

Darker--louder

We are the men forgotten by you

Blacker and blacker we grow in our thinking

Louder and louder we cry

Darker and out
JIMMY gestures to CHINESE: See?
CHINESE pauses, turns embarrassed to audience.

Chinese

Ladies and gentlemen, I had not expected this film.

(Angrily, to JIMMY:) We are here to discuss 'm therfucker'.

Music comes on, ceremonial.
Chinese DANCER and girl DANCER come on from opposite sides.
THEY dance and gray SHADOWS join them.
The music includes car sounds.

Jimmy

(as dance ends and SOLDIER comes back on, to audience, and C.)
Do you not see that it is only at the extremes of conscience and extremes of action that those who live us

Chinese

It is not true! (smiles and nods apologetically to audience)

(to JIMMY:) I have lived in extreme of calm -- in extreme -- of courtesy -- in extreme -- of -- consideration

Jimmy

Now he's talkin' (to audience)

Chinese

No, it is not true. I am not talking. It is your Western ways talking. They say -- push out this way -- push out that way -- lose your respect.. (Weeping, Chinesely) I have lost mine.

Soldier

(to JIMMY) Hey Mac. What's eatin' him?

Jimmy

(to SOLDIER) I don't know...He's tryin' to figure out what the word motherfucker means.

Soldier

Tell him it don't mean nothin'...hey he's a gook ain't he? What's he talkin' to a white audience for?

Jimmy

You talk to them.

Soldier

Me? I'm over here fightin' a war -- or sittin' on my --. Mother fucker don't mean nothin'. It just means I'm angry when I say it.

Chinese

But why you angry?

Soldier

You shut up. I ain't talkin' to you. (To audience) I first heard Motherfucker when I was 15. In the Bronx. 'Motherfuckin' son of a bitch.' We used it tc prove youwas a man, somethin' like that.

JIMMY nods rapidly, delighted.

Soldier

Then, when I was twenty, we didn't use it no more. We'd say 'How do you do. Where you wanna go.. Ya goin' some place?' Things like that... Polite.

CHINESE laughs at this.

Soldier

What's the gook laughin' at?... We ain't no war with China but if he was over here (glares at HIM)

Chinese

You call me motherfucker.

Soldier

I'd do worse 'n that.

Chinese

Now I begin to have faint right on meaning of word. It means ' to confuse people.' Why people want to confuse each other in this land?

Soldier

Why you got a gook lecturin' to you? What kinda people are you anyway. He don't know nothin' about the word 'motherfucker'. I know about it.

Jimmy

Me too. Me too.

Soldier

Oh oh here comes one o' them sneaky bastards now. (Cocks gun and fires twice, misses. Fixes bayonet to rifle, saying:) Motherfucker! (As HE is about to engage in combat, HE receives a bullet in HIS chest, the blood spouts, and HE falls. Screen goes out of focus and pale.)

Jimmy

So now we've had an object lesson.

Lecturer

(with hands folded, bowing to audience) Forgive me. (Clapping hands.) Dancer! Dancer!

Chinese DANCER comes on Questioningly.

Lecturer

Other dancer too

Other DANCER comes on. LECTURER conducts THEM. THEY dance, Western and Chinese DANCERS, till lights fade out.

END

GLOBAL VILLAGE

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GLOBAL VILLAGE VIDEO RESOURCE CENTER INFORMATION SHEET

APRIL/1972

I. Global Village has been in existence since September of 1969. During this period it has pioneered in exploring the potentials of video as a cultural, educational, community, and artistic resource. It has developed new forms of communications process through a wide spectrum of activities.

II. At present two production groups consisting of approximately five full-time people each, work with the co-directors, Rudi Stern and John Reilly, on a wide spectrum of projects.

III. Global Village Video Workshops and the Experimental Video Center in association with the New School for Social Research:

> Approximately fifty students are currently working with Global Village on various projects which they are initiating and producing.

These workshops and the documentation of this process is being supported, in part, by a grant from the Rockefeller Foundation and a matching grant from the National Endowment for the Arts. (-See the New School Bulletin for a description of these courses-)

IV. Global Village Video Resource Center is a non-profit tax-exempt, educational research and consultation service. This Center produces various video projects for an expanding spectrum of community and social action organizations. The New York State Council on the Arts has funded and continues to assist Global Village in these areas of community involvement.

V. This community use of video is directly related to Global Village programming on Public Channels on which three and one-half hours of current work is cablecast each week.

GLOBAL VILLAGE VIDEO RESOURCE CENTER

These Public Channel cable programs which Global Village began in July of 1971 will again be expanded in the near future so that more current work can be shown.

VI. A partial list of individuals and organizations for which Global Village has produced video programs include the following:

Soho Artists Association
Hospital Audiences, Inc.
Viet Nam Veterans Against the War
National Association for Irish Freedom
Daytop Village
Street Theatre of Ossining
Chelsea Print Project
Erickson Foundation
WBAI, Pacifica Broadcasting
Krishna Consciousness
Gay Activist Alliance
Lower Eastside Community Center
Clergy-Laymen Concerned
People's Coalition for Peace and Justice
National Conference of Christens and Jews
Environmental Protection Administration, N.Y.C.
Government of Bengladesh
District 15: Drug Rehabilitation Project (Brooklyn)
Jazz Interaction
Child Research Service
City Walls
Cooper-Hewitt Museum
Gay Activists Video Collective
Theatre for the Forgotten
Gil Evans Orchestra
Mental Patients Resistance
Pacifica Foundation
Open Theatre
Natural Sound Workshop
Planned Parenthood Association
Julian Beck
Jay Milder, Member of Rhino-Horn
John Lennon and Yoko Ono
Larry Rivers
John Harriman
Center for New York City Affairs (New School)

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VII. When possible Global Village will join with other groups to co-produce more extensive projects. For example: a co-production with Joko Productions (John Lennon and Yoko Ono) on the problems in Northern Ireland. Another example of this is a current project with the Center for NYC Affairs of the New School for Social Research.

VIII. Global Village has presented work on the BBC, CBC, West German Television, Netherlands Television, Italian Television as well as on National Educational Television in New York.

IX. Global Village continues to present experimental video programs and symposia at various colleges and institutions in this country and abroad.

A partial list to date includes the following:

Harvard University
UCLA
Goddard College
NYU
Pratt
McGill University
CCNY
Brandeis
Experimental Television Center (ORTF) Paris
American Bi-National Center, Koln, Germany

X. Global Village continues to experiment with public, regularly scheduled multi-channel and video documentary programs at its studio: 454 Broome Street

At present these programs are offered free to the public every other Saturday evening at 9:30 PM. Notices of these programs are given in the Village Voice, and over WBAI and WPLJ.

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XI. The co-directors of Global Village are currently writing a book entitled "Global Village Video Manual" to be published by St. Martin's Press covering all aspects of portable television and 1/2 inch video as a community and artistic resource.

FOR LISTS OF CURRENT EDITED TAPES AND INFORMATION REGARDING DISTRIBUTION, PLEASE CONTACT GLOBAL VILLAGE VIDEO RESOURCE CENTER:

454 Broome Street
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VIDEOTAPES BY RUDI STERN

PRODUCTION GROUP: Joie Davidow
Susan Shapiro
Sal Spiezia

CURRENT DISTRIBUTION LIST

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TAPE #1 GLOBAL VILLAGE VIDEO JOURNAL: I

26 min., B/W and Color

Edited by: Joie Davidow

This videotape journal, containing the elements listed below, is in a magazine fromat. The structure and style of such a video magazine are being explored to determine feasible prototypes for college distribution networks.

CONTENTS

"Faces": a video light composition

Dhun/Chinese New Year Celebration: a video/light composition employing laser projections by Lloyd Cross and the dragon dance inaugurating "The Year of the Pig".

Video/Dance Composition: Alexandra Kasuba's Environment: Emanuel Ghent's Electronic Composition: Costumes by Evelyn Roth and Deborah Rappaport from the Museum of Contemporary Crafts Exhibition: "Costume Statements" June, 1971.

Witch-In: Central Park gathering of metropolitan witches: interview with Dr. Martello about the civil rights of witches.

Central Park Video Poem: a video composition about Sundays in New York (This tape was broadcast on WNET-TV on "Free Time" in May of 1971)

Brighton Beach confronts Earth People's Park: an urban commune. A video dialogue between the Jewish mothers of Brooklyn and commune members. This sequence was shot as part of the Global Village Video Workshop during the Spring term of 1971.

Paul Silbey's Massage Lesson: the fine points of body massage in an educational spirit.

Open Theatre: exercise in sound and body movement with a true story by Chami Chaikin concerning her visit to a friend in the hospital.

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TAPE #2 GLOBAL VILLAGE VIDEO JOURNAL: II

24 min., Black and White

Edited by: Wayne Hyde

Interview with Anthony Colombo of the Italian-American Civil Rights League: March 1971

Bowery Interview: March 1971

Christopher Street Liberation Day: Gay March and reacting by-standers: June 27, 1971

Daytop Village: a drug rehabilitation concept and facility on Staten Island: May 1971

Abbie Hoffman at the Judson Church Flag Show: shot by Jim Sheldon: November 1970

STAR: Street Transvestites Action Revolutionaries, a radical Lower East Side Commune: March 1971

"City People, City Walls": an excerpt from a video documentary dealing with the reactions of people to wall paintings in their neighborhoods: August 1971

Krishna: devotees performing in Central Park on a Sunday: March 1971

TAPE #3 Christopher Street Liberation Day March: June 27, 1972

22 min., Black and White

Edited by Rudi Stern/Joie Davidow

A video documentary dealing with the second anniversary of the Stonewall Riot. The march up Sixth Avenue, the gay-in at Central Park, and the reactions of by-standers comprise the structure of this work. The tape reflects the spirit of the gay movement in achieving self-awareness and social freedom. Onlookers' reactions serve as a document of some of the existing gaps in public awareness towards the liberation movement. The tape has been shown on one of New York's public channels(Sterling/Manhattan Cable) and is being circulated and shown by the Gay Activist..

Some of the potentials of street television and portable video as a social and community resource are explored in this tape.

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TAPE #4 CITY PEOPLE/CITY WALLS

A video documentary on wall paintings and neighborhood reactions. 18 min., Black and White

Edited by: Joie Davidow

A group of artists has been involved in painting huge murals on the sides of Manhattan buildings. They are on Park Avenue, the Lower East Side, Houston Street, and the West Side Drive. This tape documents the effects of these works of art on the people who live with them. The tape explores neighborhood environments as they relate to the city muralist. Bob Wiegand of City Walls, Inc. worked closely on the production of this tape.

TAPE #5 COSTUME STATEMENTS

An Exhibition at the Museum of Contemporary Crafts in June of 1971. 13 min., Black and White

Edited by: Joie Davidow

A video documentary about an unusual participation costume show and the reactions of museum visitors as they wear the designs. The concept of this show demonstrates new ways in which museum exhibitions can relate more directly with the public they serve. This tape was commissioned by Evelyn Roth, one of the participating artists in the exhibition, on behalf of Intermedia in Vancouver.

TAPE #6 ST. PETER'S FIESTA: A VIDEO DOCUMENTARY BY JOIE DAVIDOW

12 min., Black and White

Shot and Edited by: Joie Davidow

This documentary deals with a four-day Italian Fiesta held annually in Gloucester, Mass. to celebrate the Blessing of the Fleet. This is one of the few communities where families still earn their living from fishing. The Fiesta is an expression of community pride in the fleet and their close relationship with the sea as the source of their livilhood.

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TAPE #7 SOHO JOURNAL I: A VIDEO DOCUMENTARY BY GLOBAL VILLAGE

30 min., Black and White

Project Adviser: Rudi Stern

Edited by: Joie Davidow

This is a video journal about a community in the process of formation. This tape was edited from approximately 13 hours of material recorded entirely by the students of two workshop groups between September and November of 1971. This video documentary deals with the emerging neighborhood of SoHo and the interrelationship of its many component elements.

TAPE #8 SOHO JOURNAL II: GLOBAL VILLAGE VIDEO WORKSHOP ORIENTATION to Experimental Television(5750-0 in the New School Bulletin: Fall 1971)

Project Adviser: Rudi Stern

Edited by the Workshop with assistance by Joie Davidow and Wayne Hyde

Workshop Participants: Mariette Allen, Issac Cohen, Eric Hauben, Ron Kessler, Yoram Lehmann, Edward Levine Robert Wiegand

This video documentary on SoHo contains the following elements:
1. Neighborhood meeting on solving the problems of increasing crime
2. George Noel: French artist living in SoHo
3. Night shift at a doll factory in SoHo
4. Galleries in SoHo: Sonnabend,Emmerich,Castelli,Reese Paley
5. Mr. Zelf and his secretary Chickadse explain the floor sanding process and its place in loft living.
6. Louis Gancher and his screws and bolts company
7. A rap about the architecture and history of the neighborhood by Ingrid Wiegand and Bob Wiegand(who are in the process of writing a book about the subject)
8. Various street interviews: businessmen, store owners, a keymaker, etc.

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TAPE #8 (con't)

This tape focuses in on the relationship of artists to the pre-existing business community and how artists are working with this sector for achieving mutual community benefits. These tapes were made with the active support of the SoHo Artists Association. They will be shown on the Public Channel Cable in Manhattan as well as at public hearings dealing with community problems.

TAPE #9 SOHO JOURNAL III: GLOBAL VILLAGE VIDEO WORKSHOP
Half-inch video: Experimental and Street Television
(5745-0 in New School bulletin: Fall Semester 1971)

Project Adviser: Rudi Stern

Edited by the workshop with Assistance by: Joie Davidow and Wayne Hyde

Technical Assistance: Sal Spiezia

Version #2 Edited by Sal Spiezia with the assistance of Susan Shapiro

Workshop Participants: Paula Barnak, Nicholas Dancy, Patricia Depew, Mel Diamond, Jim Hanlan, Gary Hoffman, Larry McDonald, Steve McGinn, Susan Shapiro

This video documentary contains the following elements:
1. Emanuel Ghent, electronic composer - resident of SoHo
2. Gay Activists Alliance Street Fair on Wooster Street
3. Stella and her Thrift Shop on Spring Street
4. Italian women rapping about the state of things in Little Italy and SoHo.
5. Neighborhood meeting at St. Anthony's Church about a proposed half-way house to be built in SoHo. Various residents' statements concerning this proposal.

The format of this documentary is that of a video magazine: short segments woven together to give a multi-faceted view of this developing area.

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TAPE #10 CHINESE LOUNGE (A VIDEO DOCUMENTARY ON A COMMUNITY PROJECT OF THE LOWER EAST SIDE SERVICE CENTER)

18 min., Black and White

Edited by: Wayne Hyde

Technical Assistance: Sal Spiezia
with: Pat Depew, Mitch Huber, Susan Shapiro

This video documentary deals with an unusual city drug rehabilitation program. Chinese men, ranging in age from 60 to 86, are involved in a methadone program, having gone from opium to heroin. In many cases these men were literally slaves to their habit and the victims of unbelievable extortion, having worked for Chinese commercial launderies twelve or fourteen hours a day, six days a week, being paid in drugs. Conducted by social workers and volunteers who are deeply committed to their clients' needs, this program is certainly one of the most unique projects of the Social Services Administration of the City of New York. This documentary is conceived as a first stage with subsequent tapes being used for street corner feedback directly involving the Chinese community and its attitudes towards an element that they generally refer to as "lepers" and "degenerates".

TAPE #11 CONCERT FOR PEACE: St. John's the Divine -- December 6,1971

30 min., Black and White

Edited by: Joie Davidow and Wayne Hyde

Technical Assistance: Pat Depew, Ron Kessler, Susan Shapiro
Mitch Huber, Sal Spiezia, Nicholas Dancy

This video tape, involving three cameras and a mixer, is a record of the concert in which the following performers took part:

Tennessee Williams
Norman Mailer
Edgar Winter and White Trash
Chambers Brothers
Phil Ochs

This tape will be distributed by the producers: People's Colalition for Peace and Justice to raise money for the anti-war cause and as a way of informing people about the efforts towards this goal.

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TAPE #12 HOSPITAL AUDIENCES INC.

Part I : 15 min., Black and White
Part II: 20 min., Black and White

Edited by: Wayne Hyde

Assembled with the assistance of: Pat Depew, Mitch Huber, Susan Shapiro, Sal Spiezia

Part I: A presentation of the Beuford Express at GreenHaven Prison. This video documentary of this Black rock group and the inmates' reactions forms the first part of a tape to be distributed by Hospital Audiences to raise money for their institutional projects.

Part II: Hospital Audiences, Inc.: its structure, its offices, volunteers, staff, etc. How it functions, what its goals are, where it sees itself going. H.A.I. is a non-profit organization dedicated to providing entertainment for hospitals, prisons, and mental institutions. It also brings groups out of their institutions by providing free tickets to Broadway Shows, Coucerts, etc.

TAPE #13 CENTRAL PARK VIDEO POEM

8 min., Black and White

Camera: Rudi Stern

Edited by: Joie Davidow

Central Park Video Poem is a video composition about Sundays in New York. (This tape was broadcast on WNET-TV on "Free Time" in May of 1971)

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TAPE #14 INTERVIEW WITH HON. MR. SULTAN AND HON. JUSTICE A.S. CHOUDHURY OF BENGLA DESH

45 min., Black and White

Camera: Wayne Hyde

Technical Assistance: Joie Davidow, Lorraine Rubino, Sal Spiezia

Interview Conducted by: Richard Zeif, Esq.

A timely and relevant interview with two leaders of the new state of Bengla Desh conducted on December 19, 1971. Among other aspects of the situation,this tape deals with the role of students in the revolution, public opinion in this country, the U.S. Government's attitudes, parallels to the American Revolution,etc. This tape is the first in a series on the emerging presence and significance of Bengla Desh. (Note: since making this tape in late December of 1971, Mr. Choudhoury was named President of the country).

TAPE #15 DOG SHIT IN FUN CITY: A VIDEOTAPE BY THE GLOBAL VILLAGE VIDEO WORKSHOP

Project Adviser: Rudi Stern

Editing Assistance: Joie Davidow and Sal Spiezia

A video documentary about the increasing problem of dog turds, droppings and related elements in New York life. The tape includes interviews with concerned city officials, midtown pedestrians, pet store owners, and doormen. It includes an interview with a woman who has not walked her dog in the last few years.

January 1972

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TAPE #16 MORGAN LOVE: HEAD SHOP WHOLESALE: A VIDEOTAPE BY THE GLOBAL VILLAGE VIDEO WORKSHOP

15 min., Black and White

Project Adviser: Rudi Stern

Editing Assistance: Joie Davidow

A documentary about the making, selling, and marketing of hash pipes. Interviews and raps with workers, managers, competitors, and customers of this large psychedelic wholesale operation. It provides an interesting insight into counter-culture commerce and the above-ground systems it needs to develope. Mel Romanoff, owner of Morgan Love, cooperated in the production of this work.

January 1972

TAPE#17 NEW JERSEY CAR CULTURE: A VIDEOTAPE BY THE GLOBAL VILLAGE VIDEO WORKSHOP

15 min., Black and White

Project Adviser: Rudi Stern

Editing Assistance: Wayne Hyde

A video insight into a unique subculture. Interviews with the owner, salesmen, and customers of the J. and F. Speed Shop in Saddle Brook, New Jersey are the substance of the tape. Drag racing, custom cars, cars as symbols of life-style, and the world of Gear Heads are locked into.

January 1972

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TAPE #18 THE SELLING OF THE STATUE: A VIDEOTAPE BY THE GLOBAL VILLAGE VIDEO WORKSHOP

Workshop Production Group: Eric Carpenter
Pat Ceasar
Bryan Gordon
Rick Granoff
Ed Levine
Alice O'Donnell
Jorge Mourao
Sal Sabaj

Editing Adviser: Sal Spiezia

Technical Assistance: Susan Shapiro

Project Adviser: Rudi Stern

15 Min., Black and White
March/1972

A look at the Statue of Liberty. Interviews with the ferry captain, foreign visitors, park service personnel, etc. in regard to the Statue as a symbol of "liberty". Patriotism and tourist souveniers work hand in hand in this national monument.

TAPE #19 CONEY ISLAND: A VIDEOTAPE BY THE GLOBAL VILLAGE VIDEO WORKSHOP

Workshop Production Group: Ken Bauer
Tom Celandine
Joe Chiara
Pat Hanson
Cynthia Kayan
Howard Marks
Marc Nitsche
Pat Sarsfield
Bruce Taylor
Nancy Jacobson
Editing Adviser: Joie Davidow
Technical Assistance: Susan Shapiro, Sal Spiezia

Project Adviser: Rudi Stern

March/1972 15 Min., Black and White

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A video documentary about the present plight of this once-fashionable amusement park. The tape explores deserted street carnival rides amid the recorded laughter of a still functioning fun house. Interviews with shopkeepers, Nathan's Hot Dog customers, Joggers on the Boardwalk, police, assorted residents, some phantoms, and a poet-genius about to be fired from his sign-painting gig.

This tape presents an interesting multilevel view of one of New York's more visual neighborhoods. As a document of an area's problems, tensions, fears, memories and defense mechanisms this tape offers an insight into the potentials of portable television as a community medium.

TAPE #20 VILLENELLE OF THE WALKING FEET: A POEM BY JOHN HARRIMAN SET TO VIDEO COUNTERPOINT BY RUDI STERN

8 Min., Black and White

Technical Assitance: Sal Spiezia
Ron Kessler
Wayne Hyde

A video poem concerned with anonymous faces in the bus terminal, lots of prismatic walking feet, bodies riding Piranesi escalators, and street crossers.

TAPE #21 STREET THEATER OF OSSINING AT SING SING PRISON

12 Min., Black and White

A Tape by Rudi Stern with Wayne Hyde
Ron Kessler
Lee Osborne
Sal Spiezia

An improvisation conducted by Clay Stevenson with ten inmates ofs the prison. The theme of the improvsation is a Christmas dinner attended by a group of brothers who are in the process of deciding their father's fate. A number of the participants were in the workshop for the first time which is surprising in view of the intensity with which they interact. This tape was planned as the first in a series with this important street theater group.

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TAPE #22 OPERATIC EXCERTS AFTER THE PLAYS OF SHAKESPEARE
Presented by the Manhattaville Opera workshop

Videotape by: Joie Davidow

Technical Assistance: Jesse Davis
Wayne Hyde
Larry McDonald

Part I : Black and White, 30 min.

Britten: Rape of Lucretia
Britten: Midsummer Nignt's Dream

Part II: Black and White, 30 min.

Verdi: Falstaff
Nicolai: Merry Wives of Windsor

Two tapes of excerpts from the plays of Shakespeare as interpreted by the masters of Opera. Performed by the Manhattanville College workshop directed by Gordon Davis.

March/ 1972

TAPE #23 JULIAN BECK

30 min., Black and White

A tape by Rudi Stern with: Sal Spiezia
Susan Shapiro

A rap with Julian Beck about the Living Theatre in Brazil, political repression, and the state of American activism.

April/1972

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TAPE #24 JAY MILDER-A VIDEO ART DOCUMENTARY

A videotape by Rudi Stern

Edited by: Wayne Hyde

12 min., Black and White

A video documentary about this American figurative painter who is a member of the Rhino Horn group. The tape deals with his work, life, children and the development of his art.

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Appendix V
Works Listed in the Text

*indicates works designated by the author as multimedia

Performance Environments		Display Environments	
Electronic Media and Actors	Environmental Theatre	Multiscreen Presentations	Environments
		1900-Cineorama	
1904-Japanese *Shimpa* plays			
1909-*Gertie the Dinosaur*			
	1910-*Don Juan*		
1911-*Eine Million*; *Rund um die Alster* review	1911 *The Miracle*, London		
	1916-Dada soirees		
1923-*The Earth in Turmoil*; *Enough Simplicity in Every Wise Man*	1923-*The Earth in Turmoil*		
	1924-*Gas Masks*; *The Miracle*, New York		1924-Hanover *Merzbau*
1925-*Trotz alledem*			
1926-*Sturmflut*		1926-NAPOLEON	

Electronic Media and Actors	Environmental Theatre	Multiscreen Presentations	Environments
1927-Hoppla, Wir Leben!			
1928-Good Soldier Schweyk			
1930-Christophe Columb			1930-Woodstock Environment
1935-39-Living Newspaper			
1936-Fruhlings Erwachen			
	1938-Hellzapoppin	1938-Vitarama	1938-Paris Surrealism show
		1948-Seagrams sales show	
1950-The Eleventh Commandment			
. . . .	. . . .	. . . .	. . . .
	1952-Cage lecture*	1952-Cinerama	
		1953-"Sample Lesson"*	
	1955-first Events by Gutai Group	1955-Circarama	
		1957-Vortex*	

Electronic Media and Actors	Environmental Theatre	Multiscreen Presentations	Environments
1958-Brussels Fair Laterna Magika*		1958-Brussels Fair INAUGURATION OF THE PLEASURE DOME Cinerama Aviorama Congorama Circarama Panorama Vortex Polyekran*	1958-first Kaprow Environment
1959-*Their Day**	1959-*18 Happenings in Six Parts**	1959-Moscow Fair Kinopanorama Eames 7-screen	
	1960-*The American Moon*	1960-*March of the Garter Snakes**	
. . . .	. . . .	. . . .	. . . .
1961-*Filmstage**		1961-Multimedia Instructional Laboratory*	1961-Segal and Kienholz tableaux
		1962-*Think Box**	
1963-*Water*	1963-*Who R U and What's Happening?**		1963-"Contact is the only Love"*
	1964-*Originale**	1964-Civil War history lesson *Verbal American Landscape**	1964-Milan Trade Fair
1965-*Intoleranza**	1965-*Night Time Sky**	1965-*Spectra-Mach I**	1965-*Oracle*

Electronic Media and Actors	Environmental Theatre	Multiscreen Presentations	Environments
1965-"Unmarked Interchange" *		1965-Black Zero *	
---------New Cinema Festival I---------			
1965-Body Works; Prune Flat; Pastoral: et al; Filmstage*	1965-Movie House; Map Room II; The Last Rites; "Mysteries of the Essence Chamber"*	1965-Move Movies;* Feedback #1*; March of the Garter Snakes*; Spectra-Mach I*; Ghost Rev*	
	1966-"Exploding Plastic Inevitable"*; Simultaniety in Simultaniety*	1966-Hubbub*	1966-"Down by the Riverside"
	---------Nine Evenings of Theatre and Engineering---------		
	1966-Carriage Discreteness*; Grass Field; Two Holes of Water-3	1966-Open Score	1966-Physical Things
1967-Astarte;* The Rake's Progress	1967-Cage's Sabboth service*; American Atrocities in Vietnam*; Victims of Duty*; Kinoautomat	1967-Labyrinthe; Diopolyekran	1967-Proliferation of the Sun*
1968-Your Own Thing	1968-Hair	1968-"The People of Texas"	1968-Feedback*

Electronic Media and Actors	Environmental Theatre	Multiscreen Presentations	Environments
	1968-Electric Ear; multimedia worship*		1968-*Ten-Foot Fan-Flashtic**
1969-*Mantra**; *The Soldiers**	1969-"Crosstalk"; *HPSCHD**	1969-*Man and Power**	
		1970-Global Village*	1970-"Imagen de Caracas"*
1971-*Tommy**		1971-Worship study	1971-*Noricama**
		1972-*Keep Truckin'**; *Threshold*	1972-"Womanhouse"

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